

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. LXX.

NEW YORK, SATURDAY, JUNE 5, 1897.

No. 23.

ORIGINAL ARTICLES.

SEMICENTENNIAL OF THE AMERICAN MEDICAL ASSOCIATION, PHILADELPHIA, JUNE 1-4, 1897.

THE PRESIDENT'S ADDRESS.

BY NICHOLAS SENN, M.D.,
OF CHICAGO.

THE American Medical Association was born at the dawn of a great era in the history of medicine. Only a few years before its organization was effected, anesthesia, which has robbed the operating-room of its greatest terrors, came into general use, and at once opened up new fields of usefulness for the surgeon. The new science of bacteriology upon which is based our modern views regarding the etiology and prevention of disease has been founded and firmly established since that time. The principles which govern the present treatment of wounds, conceived by the immortal Lister and developed to the existing state of perfection by a host of his enthusiastic followers, have revolutionized the practice of surgery during the last quarter of a century. Normal and pathologic microscopic anatomy are recent acquisitions to our knowledge of living tissues in health and disease. Aseptic midwifery is the direct descendant of aseptic surgery, and has secured for the lying-in woman the same protection against puerperal complications as the employment of aseptic precautions will largely prevent the occurrence of suppuration, sepsis, and pyemia in the treatment of the injured and patients requiring operative treatment. Anesthesia and asepsis have created visceral surgery.

Our knowledge of chemistry and physiology has been vastly increased during the last fifty years by thousands of earnest and devoted students in possession of improved instruments and apparatus for accurate investigations. During the same time great strides have been made in the practice of medicine and the preparation and methods of administration of drugs. In the light of many of these recent advances we have at least learned that disease is influenced for the better by aiding and assisting rather than by combating and opposing Nature's resources. Transillumination of the body by the wonderful Röntgen ray is the last and most important addition to our diagnostic resources in medicine and

surgery. In these events which have startled the medical world in such rapid succession during the last half of the century many members of our Association, dead and living, have taken a prominent and often leading part. In looking about for an appropriate subject for my address at this meeting I have deemed it expedient to utilize my time and this unusual opportunity in discussing as briefly as possible

THE AMERICAN MEDICAL ASSOCIATION, ITS PAST, PRESENT, AND FUTURE.

This is a day of rejoicing to the medical profession of the United States. We celebrate to-day the semi-centennial, the Golden Jubilee, of the American Medical Association. It is appropriate that you should have selected Philadelphia as the place of meeting at this time; it was here that the organization of our Association was completed half a century ago. Philadelphia is near and dear to every American citizen, as it is the birthplace of the greatest and most prosperous nation in the world.

It is here that on July 4, 1776, the most precious document in the possession of the American people—the Declaration of Independence—was signed, read and approved by the representatives of a people who craved for freedom, liberty, and independence. It was here that the sweet music of the Liberty Bell was first heard, the reverberations of which reached from the Atlantic to the Pacific, and from the Great Lakes to the Gulf of Mexico, and which has continued and will continue to echo and re-echo over our vast and free country for all time to come. It is a source of congratulation to every and all honest and progressive practitioners of medicine that this document, which was the means of planting a free government upon the virgin American soil and creating a new nation, was signed and heroically defended by America's great physician, Benjamin Rush.

The bloody struggle for independence culminated in the foundation of the great Republic of the United States, which in time gave the medical men an opportunity to establish American medicine upon a free American soil. It is not surprising that the organization of the profession, the establishment of institutions of learning and the foundation of American medical literature met with many difficulties which it required years to overcome.

Most of those who were helpful in laying the corner-stone of this great national institution have gone

to their reward; few are left to tell the tale of the early struggles, frequent disappointments, and final triumph. Of those who have been permitted to witness the celebration of the semicentennial, these names are familiar to you all, Nathan S. Davids of Chicago, Alfred Stille of Philadelphia, J. B. Johnson of St. Louis, and D. F. Atwater of Massachusetts.

The founders of the American Medical Association were deeply impressed with the dignity and responsibility of our profession; they had for their object a higher standard of medical education, a more general diffusion of medical knowledge, and the creation of a respectable American literature. The idea of organizing a national medical convention originated in the New York State Medical Society and was discussed for the first time at the meeting in 1844. At that time quackery in its worst forms prevailed; the services of the honest physician were undervalued, and his standing in the community compromised on all sides by his less conscientious competitors with and without diploma.

Although the idea of a national convention arose in the New York State Medical Society, the most violent opposition to the organization of the American Medical Association came from New York State.

A meeting was held in Philadelphia, May 5, 1847, in which the organization of the Association was completed. It was attended by two hundred and fifty delegates. The annual meetings were held with regularity and with increasing attendance until the great War of the Rebellion drew a line between the North and the South, which temporarily parted the profession. No armies ever enjoyed to a greater extent the blessings of military surgery than did those of the North and South. The work done by the medical officers on both sides will always occupy an honorable position in the annals of military surgery. The war interrupted the meetings of the American Medical Association, but they again resumed their annual course at Boston in May, 1865. This meeting was attended by two hundred delegates. The only thing which savored of war and which showed the intense excitement which still prevailed, and which caused a serious discord was the expulsion from the Association without trial of Dr. Montrose Pallen, an alleged sympathizer with the South, who then resided in Canada. Dr. Pallen was most unreasonably charged with the heinous crime of introducing small-pox among the people of the North and East. In spite of earnest protests by a number of the cool-headed delegates, he was expelled without trial. It is to the credit of the Association that Dr. Pallen was exonerated and reinstated at the next meeting, which was held at Baltimore in 1866.

After the close of the war, the delegates from the

South at once resumed their attendance; the most cordial relations were restored, and many of the largest and best meetings have taken place in the Southern cities.

The influence of the Association has been markedly felt in improving the standard of medical education. Nearly all our medical schools, large and small, now require four-years' attendance of eight months each upon a systematic graded course and, with few exceptions, furnish adequate laboratory and clinical facilities. There is no longer excuse for our medical students to seek foreign universities to obtain a thorough medical education. It requires no stretch of the imagination to predict with certainty that our country will become the center of medical education within twenty-five years, and our medical institutions will be sought by foreign students, as they will in the course of that time furnish facilities for teaching far in advance of those of any other country. Our medical schools are undergoing a rapid evolution by acquiring unlimited financial resources and by the development of model, practical, clinical teachers.

The polyclinics and the post-graduate medical schools, which have recently appeared upon the field of medical instruction and which had their origin in this country, have done good work in furthering the objects and directing the ambitions of the progressive practitioners, old and young. They never have and they never will take the place of medical societies as post-graduate institutions for the enlightenment and advancement of the great mass of practitioners. Medical societies, large and small, are the legitimate and the proper post-graduate medical schools.

Every medical society contains more or less of that morbid material, known as the "political doctor." These men appear more for the purpose of being seen and heard than to promote the legitimate work of the society. They seldom read papers or take part in the discussion of scientific subjects. They know something about parliamentary law, and are anxious that their more timid and less-informed colleagues should know it. This is an unfortunate element in any medical society. Another feature of medical society meetings that demands criticism is the stating off hand of favorable statistics. A sense of honesty should compel participants in any discussion to report their unfortunate as well as their favorable cases, and to record their mistakes as well as their successes. Embellished, painted statistics, too prevalent at this time from ambitious operators, are dangerous traps, and should be scrupulously excluded from the current medical literature. Honesty in medicine, as elsewhere, is always the best policy, and

will be amply rewarded at the proper time. Clinical reports are valuable when properly made, harmful and misleading when based on superficial observation and written from memory instead of from an accurately kept case-book.

Prize essays of the American Medical Association have taken a high place in American medical literature, and it must appear plain to everyone that the practice should be resuscitated.

One of the potent agencies in the hands of the members of this Association to place American medical literature upon a sound basis is our official organ, the *Journal of the American Medical Association*. It should be and has already become the mouthpiece of the American medical profession.

One of the present needs of the Association is a permanent home, with an editorial office and a press-room for its official organ, a hall for the meetings at least every three years, a library room for American medical literature, and a memorial home, for paintings, busts of distinguished members of the Association, and a room for a collection of surgical instruments and indigenous medical plants. The present financial status of the Association justifies the taking of the necessary steps to bring such a project into effect at an early date. Such a modern Æsculapian temple would soon become the Mecca of those in search of American medical literature, and a rich storehouse for everything pertaining to the medical history of this country.

Our organization is now complete and in excellent working order. We can devote in the future all of our time to practical scientific work. It is difficult to foretell the possibilities of the second half of the first century of the existence of the Association. It is, however, safe to predict that when the first centennial celebration will be held in this city, fifty years from now, the membership will have increased to seventy-five or one hundred thousand, but the literature of to-day will then be as old and useless as that of fifty years ago. We are now laying the cornerstone and are slowly but surely building the foundation for rational medicine and surgery, and the work of the next fifty years will no doubt contribute still more toward making medicine and surgery exact sciences.

A Mighty Protagonist for Woman's Rights.—In conferring recently upon Fraulein Gabriele von Possanner who received the first doctor's degree ever given by the University of Vienna to a woman, the rector congratulated the candidate in highly complimentary terms, greeting her as a "mighty protagonist for woman's rights," who, "by her great energy and intelligence, has victoriously overcome the manifold obstacles in her way."

SURGERY.¹

By W. W. KEEN, M.D.,
OF PHILADELPHIA:

PROFESSOR OF THE PRINCIPLES OF SURGERY AND OF CLINICAL
SURGERY IN THE JEFFERSON MEDICAL COLLEGE.

As we celebrate on this occasion the semicentennial of the organization of the American Medical Association in this city in 1847, it is very natural and proper that the Address on Surgery should be a review of the work done in the last fifty years, and by contrasting the state of surgery and of surgical teaching in 1847 with that which exists in 1897 to see what progress has been made. The time also is opportune. Last year was celebrated the Centennial of Vaccination and the Semicentennial of the First Public Administration of Ether. Sydney Smith's bitter query in 1820: "In the four quarters of the globe, who reads an American book . . . what does the world yet owe to American physicians or surgeons?" was answered a quarter of a century later and made all these "four quarters of the globe" our grateful and everlasting debtors. The discovery of an American dentist; first used by an American surgeon; christened by an American physician and *litterateur*, its recent celebration awakened throughout the world the interest, not only of the profession, but also of the entire public; and the strains of our still living poet, novelist, physiologist, and, as we all best love to know him, neurologist, Dr. S. Weir Mitchell—*nihil tetigit quod non ornavit*—as he sung of the "Birth and Death of Pain," have scarce died away before we begin anew our round of celebrations in the anniversary of this now almost venerable "Association."

A most important factor in the improvement, not only in surgery, but in all departments of medicine, has been the immense advance made in medical teaching. If the teachers of fifty years ago were to revisit the scenes of their early labors they would scarcely recognize the medical colleges in which, in their day and generation and with the meager appliances than at their command, they did what we must still recognize as yeoman's work in education. Apparently at that time the entire instruction consisted in lectures, text-books being not even advised. In reply to a letter addressed to the Deans of the Jefferson Medical College, the University of Pennsylvania, Harvard University, and the Medical Department of Columbia University, I am told that no list of text-books whatever appears on the catalogue of fifty years ago.

The course of didactic lectures then began on the second Monday of October and ended soon after the

¹ Abstract of an address delivered at the Semicentennial Meeting of the American Medical Association, Philadelphia, June 3, 1897.

middle of February, and if we take out the holidays and remember that not a few made up for coming late by leaving early, it was quite a possibility for a man to receive his authorization to practice, after practically only two sessions of three months each! The examination was a farce and the diploma a falsehood. Even so late as 1860, when I began the study of medicine, there were no laboratories, except that of anatomy—the dissecting room. I doubt if of the two hundred and odd men who graduated with me in 1862 ten per cent. had ever looked through a microscope or handled a test-tube, palpated a tumor or auscultated a chest. There were no recitations. Nor were there ward classes or other means for actual contact by the student with disease.

Now we may congratulate ourselves that the majority of the medical schools of the country have a graded course of four years, each covering not less than six and often eight months, not only lectures, but in many instances constant and searching recitations; almost a score of laboratories in which each student actually does the work of observation and experiment; ward classes in which every man is obliged to train his eyes, his ears, his fingers, and his judgment in the examination of patients in every department of medicine; to ferret out the history of the cases brought before him, ascertain symptoms, seek for physical signs, reach a diagnosis, determine the treatment, and often actually to prescribe and to assist at operations.

Of the text-books in use forty years ago, except Pancoast's "Operative Surgery," every one of them was the work of a European. Gross' "System of Surgery," which has probably had a wider influence in educating the profession than any other general surgical text-book issued up to the present time, was first published in 1859. This was far in advance of most of the surgical text-books then in use. The literary labors of American surgeons consisted chiefly in translating foreign surgeries or in annotating American editions of English text-books. Within the last two decades, and especially the last, we all know without my undertaking the invidious task of naming them, how many distinctly American surgeries have been written, and we may say without undue national vanity that they are the equals of any similar European works.

On more than one occasion I have had to call attention to the difference between American surgery and that of Europe. While in the department of the Practice of Surgery, after a full acquaintance and observation with European men and methods, I can state my deliberate conclusion that the best American surgeons are the peers of the best European surgeons; yet in the department of original research and

especially of laboratory work, we must confess our very evident shortcomings.

To attempt to impress upon the members of the American Medical Association the need for such original research in this country is a work of supererogation; but I may with propriety insist, with all the ardent and intense conviction I feel, that every one of us, as occasion offers, should urge upon our wealthy liberal-minded fellow-citizens the duty and also the privilege of founding in connection with every medical school, laboratories of research, the good influence and beneficent results of which can never be estimated in paltry dollars and cents. Yet tried even by this commercial standard science pays. The early recognition of the germs of cholera at the port of New York some years ago by preventing the entrance of such a commerce-destroying epidemic, leaving wholly out of consideration the saving of human life, saved to the citizens of the metropolis more millions of dollars than are represented many times over by the cost of all the laboratories now existing in this country. Our merchants should be made to understand, therefore, that even from a financial point of view, to say nothing of the humanitarian, the cheapest means of preventing the enormous business losses which occur from epidemics is by such scientific and hygienic measures as the laboratory makes possible.

Allied to medical teaching, and the most important adjunct to medical literature, is the establishment of extensive medical libraries. In this, as an American, I am proud of my own country. No foreign nation can point with equal pride to any such medical libraries as the last thirty years have developed in this country. Foremost, not only among American libraries, but in the world, is that of the Surgeon-General's Office of the United States Army in Washington. Not only has it gathered thousands of medical books and the 1000 medical journals from all over the world, but the entire library is managed with a liberality which makes it the admiration and the envy of the foreigners. Its treasures are freely at the service of the entire profession of the country, and the publication, under the editorship of Dr. John S. Billings, of its magnificent Index Catalogue has made the whole world debtor to America. We trust that a more liberal Congress may see that if even the small amounts thus far given to it have made it of such immense value, still larger and more generous appropriations would keep it ever in the van.

In addition to this, the libraries of the College of Physicians of Philadelphia, of the New York Academy of Medicine, and of the Boston Medical Library Association are only surpassed by those of the Facul-

ties of Medicine in Paris, of the Royal College of Surgeons of London, and of the Military Medical Institute of St. Petersburg, while those of the Newberry Library in Chicago (thanks to our honored and liberal President), of the New York Hospital, and of the Pennsylvania Hospital rank well with the best European libraries. With such literary opportunities, therefore, had we equally good scientific laboratories, the possibilities of American medicine and surgery would be almost unbounded.

The scientific progress in this half-century of surgery has separated us as by a great gulf from the past. Great theologians, such as a Calvin or a Jonathan Edwards, were they recalled to life, could discourse as learnedly as ever of predestination and free-will; great preachers, as a Beecher or a Spurgeon, could stir our souls and warm our hearts as of old; great jurists, as a Justinian or a Marshall, could expound the same principles of law which hold good for all time; great forensic orators, as a Burke or a Webster, could convince us by the same arguments and arouse us by the same invectives or the same eloquence that made our fathers willing captives to their silver tongues. But to-day a Velpeau, a Sir William Fergusson, or a Pancoast, all of whom have died since 1867, could not teach modern surgical principles, nor perform a modern surgical operation. Even our everyday surgical vocabulary—anesthesia, bacteria, infection, immunity, antiseptics and asepsis, toxin and antitoxin—would be unintelligible jargon to them; and our modern operations on the brain, the chest, the abdomen, and the pelvis would make them wonder whether we had not lost our senses, until, seeing the almost uniform and almost painless recoveries, they would thank God for the magnificent progress of the last half-century which had vouchsafed such magical, nay, such almost divine, power to the modern surgeon.

The development of modern surgery, apart from surgical teaching, libraries, and laboratories, is dependent on several noteworthy factors. These have to do partly with the discovery and development of surgical principles and partly with the development of surgical practice. Now the one and now the other is in advance. Each is the handmaid of the other. In Listerism we see surgical practice outstripping surgical principles, for of Lister it might truly be said that by the "scientific use of the imagination" he saw the germs "when as yet there were none of them." His surgical insight convinced him of the existence of the germs of suppuration years before Ogston's and Rosebaum's discovery of the pyogenic organism. On the other hand the multiplication of these discoveries, which have followed, illustrate the converse—science forging ahead of practice and

pointing the way to new achievements in the healing art.

Foremost among the important studies which the past fifty years have seen established on a firm foundation are *Pathology and Pathologic Anatomy*. It is not a little credit to America that the first "Pathology" written in the English language was written by a young American doctor in a then small western town as early as 1839, and it was a graceful tribute to the author when Virchow, the Nestor of modern pathology, held up a copy of the first edition of Gross' "Pathological Anatomy" to the gaze of his fellow-scientists at a dinner tendered to the Nestor of American Surgery.

In spite of Gross' book, however, pathology and pathologic anatomy were almost unknown sciences in 1847. The Pathological Society of Dublin was founded in 1839, that of New York in 1844, that of London in 1846, and that of Philadelphia in 1857. The microscope and especially microscopic methods of staining, section cutting, and the like were in their infancy or may, indeed, be said scarcely to have existed. No accurate views of pathology could be entertained without these aids. What is now the heritage of every first-year student, was beyond the possibilities of the most advanced teacher of fifty years ago.

Allied sciences have been put under tribute to surgery. In physics the discovery of the *Röntgen ray* is so recent as to require only mention.

It is due, however, especially to the development of *Embryology* and *Comparative Anatomy* in combination with pathology, that our views of the nature of the disease have become so much more accurate.

The year before the American Medical Association was organized, the world was startled and surgery revolutionized by the introduction of anesthesia; first of ether in America in 1846 and of chloroform in Edinburgh in the following year. What this has done for the amelioration of the horrors of pre-anesthetic surgery, very few now living can appreciate. Instead of shrieks, cries, and groans of the patient, everything now proceeds with that quiet and leisure which is essential to the performance of many, if not most, of our modern elaborate and prolonged surgical operations. Now, "the fierce extremity of suffering has been steeped in the waters of oblivion and the deepest furrow in the knotted brow of agony has been smoothed away forever." Who could possibly endure the torture of an operation lasting for one, two, or it may be even three hours, when every minute seems an eternity of agony? I would rather be the discoverer of anesthesia than have won an Austerlitz or a Waterloo.

The ideal anesthetic has not yet been obtained.

No one can fail to see that ether or chloroform and also a few others which occasionally replace them have very real dangers. The ideal anesthetic will abolish pain by the abolition of consciousness, *but without danger to life*. That it will be found is as certain as that experiment and progress are our watchwords.

Antiseptic Surgery.—While the exact date of the revelation in surgery due to anesthesia can be fixed, a later revolution in our surgical methods came in so gradually that one cannot name any special day or even year when it was introduced. But, while the day or year cannot be given, the one man to whom this great revolution in modern surgery is due is well known. The name of Lister *primus inter pares* is honored throughout the entire surgical world and his recent distinction as the first medical peer of the United Kingdom is an honor conferred not upon Lord Lister alone, but upon the entire profession and worthily marks a new departure in the recognition of medical science by the Queen.

So far as this country is concerned, the introduction of antiseptic surgery may be said to date from the visit of Mr. Lister to this same city of Brotherly Love at the Centennial International Congress of 1876. Derided as first as a "fad" or as "nothing more than surgical cleanliness," it has now won its way over the whole world. A few laggards in the surgical army there are who even yet do not practice modern antiseptic or aseptic surgery, but the overwhelming majority of the profession recognize that the world owes a debt to Lord Lister, which no honor can pay. His service to humanity will never be forgotten and probably never will be surpassed in its wide-reaching beneficent influence.

As an outgrowth from the practical development of antiseptic surgery has arisen a wholly new science and a wholly new method of practice, which bid fair to revolutionize our modern therapeutics—*Bacteriology and Orrhothorapy*. These are so recent that it is dangerous to prophesy what may occur, but it is not venturing far to predict that fifty years from now we shall be able not only easily to convert infected into non-infected wounds, but that by some means as yet undiscovered we shall be able successfully to combat the infection and prevent the dire ravages of tuberculosis, of syphilis, of cancer, of sarcoma, and possibly even the occurrence of benign tumors. That will be, indeed, the golden age when surgery will be robbed of nearly all its terrors, when a peaceful victory will abolish our present instruments and the majority of our present operations.

Animal Experimentation has had also a very large share in the development of modern surgery. The whole question of the introduction of animal liga-

tures was begun in America by Physick, who used buckskin, and his follower, Dorsey, who used kid and cut both ends short; Hartshorne, who used parchment, and Bellenger and Eve, the tendon of the deer, and has been solved principally by experiment upon animals in order to determine accurately the behavior of such ligatures in the tissues. Only professional readers can appreciate what a boon to humanity this single achievement has been. Modern cerebral surgery also owes its exactness and success almost wholly to cerebral localization and antiseptic, both of which were first studied by experiment upon animals, and later by the application of the knowledge so gained to man. *Bacteriology would not now exist as a science nor would accurate modern surgery and a large part of modern medicine be possible had experiments upon animals been prohibited, as some zoophilus women who love dogs better than men and women, and even little children, desire.*

Time will not permit me to trace chronologically the introduction of new instruments and new operations.

One of the most striking departments in which progress has been made is in that of the nervous system. In this Mitchell, though not a surgeon, has suggested many surgical advances. I have already quoted South's dictum as to fractures of the skull, a dictum which is now violated, with the happiest results, by almost every surgeon in the land. In addition to this, a very large number of tumors of the brain have been successfully removed, tumors which, before 1884, were considered as wholly outside the domain of surgery. To our English brethren, Godlee, Horsley, and Macewen, above all others, is due the credit of establishing cerebral surgery on a firm basis of right principles and successful technic.

In abscesses of the brain we have a lesion which is still more amenable to treatment, and the number of recoveries now mounts even into the hundreds. Thanks to the otologist, we can now, by proper treatment, in many cases do better than operate on these abscesses, we can prevent them.

Tumors of the spine, since Mr. Horsley's brilliant paper in 1888, have been proved accessible to the modern surgeon. Though Abbé's division of the posterior nerve roots in cases of intractable neuralgia has not been followed by all the success we could wish, it has proved that the operation is a practicable one. While, in the words of the hymn, we have not yet "stretched every nerve," we have almost realized that pious exhortation.

Not only have accumulations within the pleura been evacuated, but Roberts was among the pioneers in the operation of *paracentesis pericardii*, while the surgery of the lung is now only taking its first tenta-

tive steps. The pericardium has also been sutured, and even the heart itself has twice been sutured with one complete recovery. We were taught by the younger Gross that the great veins could be successfully tied, and the recent researches of Abbé and Murphy may open a new chapter in the surgery of the arteries by substituting suture for occlusion by the ligature.

The accessory organs in the abdomen have been conquered by the modern surgeon; fifty-seven tumors of the liver have been removed with a mortality as low as 13.5 per cent. The world owes to America the operation of cholecystotomy, since it was first done by Bobbs in 1868, and was popularized by the powerful influence of Sims in 1870. Pancreatic cysts, chiefly through the labors of Senn, are now amenable to treatment. The spleen has been extirpated many times.

The appendix, that meager but most troublesome ancestral vestige which, with the bicycle, has been the faithful friend of the surgeon through the past few years of commercial depression, has been recognized as the real origin of the so-frequent abscesses in the right iliac fossa. Beginning with Willard Parker's paper in 1867 and Fitz's memorable paper in 1886, the treatment of appendicitis and even its much-abused name are distinctly of American origin, and are an immense credit to American surgery.

Until Simon's classical experiments on dogs in 1870 (*Deut. Klinik*, xxii, 137), the kidney was a practically inaccessible organ, but now, when it wanders, we secure it by suture; when there is a stone in it, we open it fearlessly and remove the stone; when it is distended with pus or urine, we drain it; and if it is past hope of recovery, we extirpate it, all with most remarkable success. Even stones in the ureter or a divided ureter, Cabot, Fenger, Kelly, and Van Hook have shown us, can be dealt with successfully.

The surgery of the pelvic organs has, one may say, been created since 1847, but its triumphs are so many that time allows me only a word. Sims' treatment of vesicovaginal fistula and his introduction of silver wire in 1852 was distinctly an American triumph.

A hasty review such as has been given of the improvements in surgery within the last fifty years does much more than show us the adroitness, audacity, and success of the modern surgeon. That is the thing which strikes us most as surgeons, but we must regard all these improvements also from the side of the patient and the family, and see what it means. It means a prolongation of life by operations which, while not without pain and suffering during recovery, have been robbed of all their primary terrors by

anesthesia, and most of their subsequent pain and suffering by antisepsis. It means that patients who, in 1847, were hopelessly consigned to the grave, after weeks and months of suffering, are now, in the vast majority of cases, rescued from death. It means that families formerly bereft of husband or wife, parent or child, and left to spend years of sorrow, of suffering, and, in many cases, of poverty, because the breadwinners were taken away, have now restored to them their loved ones, in health and strength and usefulness. It means that the hecatombs of a Cæsar, of an Alexander, a Napoleon, are offset by the beneficent labors of a Morton, a Warren, a Lister, who are, and who for all time will be, blessed by many a poor patient who never heard of them, instead of being cursed as the destroyers of nations and of homes innumerable. It means that man's inhumanity to man shall be replaced by a scientific and Christian altruism which sheds blessings and benefits on the whole human race, seeing in the patient, whether saint or sinner, only a human being who is suffering from accident or disease, whom it is the province of the surgeon, in imitation of Him who went about doing good, to restore to health and happiness. Even where life cannot be prolonged, the agonies of death itself can be soothed by his hand and his fruitful skill.

What the future has in store for us we can only dream. Two diametrically opposing tendencies are prominent in modern surgery: radical interference with disease, so that there is scarcely now a single organ or portion of the body not within our reach; yet, on the other hand, a remarkably conservative tendency in cultivating remedial rather than radical surgery. Joints so diseased as once to require amputation are now treated conservatively with the best results. Ovaries, a portion of which can be preserved, are kept in the abdomen; kidneys once doomed to extirpation are now partially removed, and bones so diseased that they then required amputation are now excised and the limb preserved. Experiments upon animals have recently given us wholly new views of infection and of the origin of many diseases, and also the little knowledge that we yet have as to either natural or acquired immunity, and to a consequent orrhoterapy.

It is, I believe, on these lines that our more immediate future triumphs will be achieved. We have discovered the actual cause of tetanus, tuberculosis, erysipelas, suppuration, and a host of other diseases and conditions, of the cause of which we were wholly ignorant a few years ago. The cause of many other disorders, both medical and surgical, still remain hidden from our view. We know almost nothing of the origin of benign tumors, and are groping to dis-

cover the origin of cancer, sarcoma, and other malignant growths. When we have discovered the cause, we are nearly half way, or at least a long way on the road to the discovery of the cure, and I think it not unlikely that in 1947 your then orator will be able to point to the time when a definite knowledge of the causes of these diseases was attained and probably to a time when their cure was first instituted.

That will be a surgical paradise when we can lay aside the knife and by means of suitable toxins or antitoxins, drugs, or other methods of treatment, control inflammation, arrest suppuration, stay the ravages of tuberculosis, or of syphilis, abort or disperse tumors, cure cancer, and it may be, so prolong human life that all of his then audience will die either of accident or of old age. Would that you and I could be alive in 1947 to join in the glorious surgical *Te Deum*!

STERCORIN AND CHOLESTEREMIA.¹

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STATE HOSPITAL, ETC.

LOOKING far into the future, it seems possible that our successors may fix upon the month of May, 1946, as the true centennial of the American Medical Association, dating the origin of this body from May, 1846, when a convention of representatives of our profession, held in New York, proposed the formation of a national association, which was formally organized in 1847.

It is not too much to say that the convention of May, 1846, marked an era in the history of medical organization in the United States. It had become necessary that the medical profession should be unified and separated from those practising under sectarian designations, particularly as at least one sect was beginning to secure the confidence of men otherwise intelligent, and assumed to practice medicine on a scientific basis. The status of medicine forty years ago is quite within my recollection. Medicine is not, never was, and never will be an exact science; but it always has been progressive, and never more so than at the present time. Fifty years ago, perhaps, medicine merited the reproach of being the least exact of all sciences; but its progress within the last fifteen years has been so prodigious that it is now in advance of them all. Fifty years ago, skill in the diagnosis of certain diseases was acquired only by long practice and large experience. With our present methods, properly employed, it is impossible to make

an error in the diagnosis of many of the diseases which formerly presented difficulties, such as typhoid fever, tuberculosis, diphtheria, cholera, and most of the neoplasms. To say that pathology has been revolutionized within the last ten or fifteen years is not enough—a new pathology has been created, and with it have come an intelligent hygiene, prevention, and therapeutics, based upon exact scientific knowledge. As no human imagination fifty years ago could have pictured the condition of the medicine of today, so it to-day seems impossible to imagine the progress of another half-century. Never, since medicine became a science, has medical history been made so fast as now. Between the time of writing and of delivering this address, scientific labor may give birth to a discovery destined to revolutionize some department of medicine, as Pasteur, Koch, and their followers have revolutionized therapeutics, and as Lister created a new surgery.

It is a matter of congratulation that the name of this body was early changed from "National" to "American" Medical Association. We have good reason to be proud of American medicine, and our great representative association may properly claim a distinctive title. When one is able to call up at random the discoveries in gastric digestion, anesthesia in surgery and obstetrics, the successful ligation of the arteria innominata, the operation for vesicovaginal fistula, ovariectomy, and intestinal anastomosis, to say nothing of minor advances in medicine and surgery, can we not claim a distinctive place for American medicine?

It is the prerogative of the presiding officer of this Association to make recommendations, and this is not the province of one appointed simply to give an anniversary discourse. The remainder of the time that has been placed at my disposal I shall venture to occupy with a subject which I hope may not prove entirely unworthy of your attention.

Stercorin and Cholesteremia.—While the presentation, on this occasion, of researches made and published thirty-five years ago—viewing the question from a physiologic standpoint—calls for an explanation and perhaps an apology, none is required if their great importance in relation to the pathology of the liver be considered, especially as cholesteremia is by no means accepted as a distinct pathologic condition. Were it not that stercorin has just been rediscovered in Germany by two eminent physiologic chemists, who make no mention of its full description in 1862 and have even called it by another name, I probably should not have repeated and extended my original observations. As it is, however, I feel that I may properly, as an American investigator, make my reclamation before the American Medical Association.

¹ Abstract of an address delivered at the Semicentennial Anniversary of the American Medical Association, Philadelphia, June 2, 1896.

Although my paper, published in *The American Journal of the Medical Sciences* in October, 1862, received an "honorable mention" and substantial recognition from the Institute of France, and my observations have been verified and extended by French and German investigators, many writers on physiology and pathology, even the most recent, fail to recognize such a substance as stercorin and, in treating of cholesterol, speak of its function as obscure or unknown.¹ In "An American Text-book of Physiology," Philadelphia, 1896, cholesterol is described as a constant constituent of the bile, very widely distributed in the body, and eliminated by the liver cells from the blood. "That it is an excretion is indicated by the fact that it is eliminated unchanged in the feces." Stercorin is not mentioned. As a matter of fact, cholesterol does not occur in the human feces in health, and its presence in this situation is exceptional.

In Hoppe-Seyler's *Zeitschrift für Physiologische Chemie*, Strassburg, 1896, is a paper by Bondzynski and Humnicki, entitled "The Destination of Cholesterol in the Animal Organism." The authors claim to have discovered a new constituent of the human feces, which they call "koprosterin." This substance is identical with stercorin, fully described in 1862. The original stercorin, of which specimens obtained in 1862 are in my possession, was extracted from the human feces by the following process: The dried and pulverized feces were extracted with ether. The ethereal extract was passed through animal charcoal and afterward evaporated. The residue was then extracted with boiling alcohol. The alcoholic extract was treated with potassium hydrate solution, at a temperature near the boiling point of water, in order to remove the fats by saponification, which were washed out with water until the filtrate was neutral and perfectly clear. The filtrate was dried, extracted with ether, and the ethereal extract evaporated to dryness and extracted with boiling alcohol. The stercorin was obtained from the alcoholic extract by repeated crystallization. This process was exactly repeated in our recent observations, and, at the same time, stercorin was extracted by the process described by Bondzynski and Humnicki.

The opinion expressed by Hoppe-Seyler, Hofmann, and indeed many others, that stercorin simply is impure cholesterol, cannot have been based upon a practical knowledge of this substance. Stercorin has a well-defined formula— $C_{27}H_{46}O$ —which has been calculated and verified by the formation of esters. Its crystals are quite different from crystals of cholesterol, and are invariable in form, arrangement, and color. It was extracted by methods prac-

tically the same as those used in the extraction of cholesterol. In view of these facts, to assume that stercorin is an impure substance, one must deny a positive scientific basis to organic chemistry.

In the recent, as well as in the original, observations, it was clearly shown that cholesterol is changed into stercorin in passing down the intestinal canal. I found that this change involved processes incidental to intestinal digestion. Cholesterol and no stercorin was found in the feces of fasting animals and in the meconium. Bondzynski and Humnicki found and increased proportion of "koprosterin" in human feces after the ingestion of a certain quantity of cholesterol. They also showed that cholesterol unites readily with bromin, while "koprosterin" forms no such combination; and, indeed, by the use of bromin, these two substances may be separated when they exist together. They confirmed the empirical formula for their product by the formation of a number of esters.

It is now generally admitted that the bile, in addition to its function connected with digestion, contains one or more excrementitious matters. Taking into consideration the various ingredients of the bile, there seems to be but one which can logically be compared to urea. Cholesterol is found in many of the tissues and organs of the body and exists in the blood. Likening it to urea, it becomes a question whether it is formed in the liver and discharged in the bile or is merely separated from the blood by the liver and excreted.

Passing from these observations to the pathologic relations of cholesterol, after examining three specimens of normal blood and finding the proportion of cholesterol from 0.445 to 0.751 of a part per thousand, examinations were made of the blood of patients with simple jaundice and those with what is called icterus gravis, the cases terminating fatally with grave nervous symptoms. In a case of simple jaundice, terminating in recovery at the end of about four weeks, the blood contained 0.508 of a part per thousand; well within the limits in normal blood. In a case of jaundice with cirrhosis, terminating fatally with serious nervous disturbance, the blood taken six days before death contained 1.850 part per thousand of cholesterol—an immense increase over the normal proportion. In this case, on *post-mortem* examination, the liver was found contracted, and the gall-bladder was shrunken, containing only about seven cubic centimeters of bile.

The question of cholesteremia has been much discussed since 1862, for the most part with scant approval or without acceptance. However, Picot,¹ in 1872, reported a fatal case of "grave jaundice" in

¹ Foster, "A Text-book of Physiology," 1895, p. 356.

¹ *Journal de l'Anatomie*, Paris, 1872, tome viii, p. 247, et seq.

which he determined a great increase in the proportion of cholesterin in the blood; 1.804 parts per thousand. Many attempts have been made, also, to produce toxic effects by injecting cholesterin into the blood, but most of them have been unsuccessful on account of mechanic obstruction of the blood-vessels. In 1873, however, Koloman Müller¹ succeeded by injecting cholesterin rubbed with glycerin and mixed with soap and water. In five experiments on dogs, injecting in each 0.045 gram of cholesterin, he produced a complete representation of the phenomena of "grave jaundice."

It must be remembered that the liver is by far the largest gland in the body; that it secretes a fluid which is known to have a double function, one connected with digestion and the other with the elimination of cholesterin; that the blood from the digestive tract all passes through this organ, where it undergoes certain changes; that it probably stores up the products of amylolytic digestion in the form of glycogen; that it arrests certain poisons, and that it is the chief organ concerned in the production of urea, which is discharged by the kidneys. It may have other uses in what is now called internal secretion, in addition to that of destruction of blood-corpuscles and the change of hemoglobin into bilirubin. With all these known varied uses of the liver, however, the pathology of hepatic diseases is most obscure. We do not know, even, the cause and mechanism of the formation of gall-stones, which are often composed almost entirely of cholesterin.

The term, *acholia*, as used in pathology, now means very little and conveys no distinct idea of the causes of the nervous symptoms which attend this condition. The term *cholemia* is generally regarded as almost synonymous with jaundice. If *cholesteremia* be recognized as a distinct pathologic condition, with symptoms due either to the accumulation of cholesterin in the blood, acting as a toxic substance, or to imperfect separation of cholesterin from the nervous tissue, a positive advance will be made in our knowledge of the pathology of many obscure liver disorders.

The quantitative estimation of cholesterin in the blood is not difficult, and it does not require more than from four to six or eight grams of blood. The only tedious manipulations are the drying, saponification, and weighing; and these are readily done in a well-appointed laboratory. Some process may be devised which will expedite this extraction. If examinations of the blood were to be made in cases of obscure nervous disturbance, in epilepsy, and other disorders of this nature, it is possible that cholesterin

may be found to play an important part in their pathology. The fact that bromin readily combines with cholesterin, taken in connection with the wide use of the bromids in diseases of the nervous system, is very suggestive. May not the bromids promote the elimination of cholesterin, a substance which is so insoluble and which forms few combinations? These points seem well worthy of the consideration of pathologists and therapeutists. Certainly the physiologic and pathologic relations of cholesterin offer a wide, and perhaps fruitful, field for further observation.

MECHANISM AND TREATMENT OF PERINEAL LACERATIONS.¹

By JOSEPH PRICE, M.D.,
OF PHILADELPHIA.

MANY men who profess intelligence of surgical procedures instituted for the relief of abdominal difficulties are entirely unprepared to deal with injuries of the perineum or cervix. There are even many of large obstetrical practice who appear sincere in declaring that no rupture of the perineum has ever occurred in their work, and that all their patients have normal perineae. There is but one explanation of this. We need only recollect that prominent instructors in obstetrics have declared that a laceration of the perineum is practically impossible under their various methods of procedure, and therefore omit even a preparation for the contingency. We cannot so easily comprehend, however, the negligence of practitioners whose personal motives should have induced a greater care in this matter than we now observe.

It is discouraging to me to consider the haste with which our younger physicians attempt the larger work of abdominal surgery and seem not to appreciate the necessity of a minute understanding of the functions of tissues, especially those involved in and surrounding organs with which we have to deal in obstetric practice. It is a matter which no amount of talk will remedy. As mere economy in this ambition I would suggest that a little more attention be directed to this particular subject of perineal lacerations. That a rupture of the perineum may be so entirely concealed as to eventually deceive the most careful examiner there is no doubt; neither do I doubt that the search is often omitted or unintelligently performed.

The teaching that these repairs are easily made has led to much unskillful treatment, treatment that leaves the patient in a worse condition than existed before anything was done in the way of attempted repair.

¹ "Ueber Cholesterämie," *Archiv. für experimentelle Pathologie und Pharmakologie*, Leipzig, 1873, Bd. i, S. 213, et seq.

¹ Read at the Semicentennial Meeting of the American Medical Association, Philadelphia, June 1-4, 1897.

The supposed condition tempts to the undertaking of that which, while not the most difficult surgery, requires, from the very delicacy and sensitiveness of the parts, careful and refined work.

It would not be unprofitable for a surgeon to undergo an apprenticeship in a mechanic's workshop where his instructor could explain the cycloidal and epicycloidal lines upon which his gear wheels must be formed, or allow him to experience directly the very disastrous results of the slightest neglect in manipulating those very exact little dealers, machines. Then I think he would appreciate the responsibility of altering indefinitely the organs of a human being, or of suffering them to remain unrepaired where accident has changed or broken normal relations. True, he has in Nature a wonderful corrector of his mischief, whose effort is ever for cure. Nature has been defined "as the good will of God expressed in facts;" nowhere has this good will been more marvelously expressed than in the correction of our errors. But it should be kept in mind that Nature despises an irrational, blundering performance as she does a vacuum.

Our surgical triumphs are largely those of common sense; they are the result of reducing everything to the simplest form consistent with completeness. There is not sufficient appreciation of the value of simplicity and directness, nor of completeness. In plastic surgery, as in all other, I would aim toward such an end. I would do an operation that would restore the perineum to as natural a condition as possible. A great deal depends on whether the tear be partial or complete, central or lateral.

It must be remembered that the perineum proper is made up of all muscles composing the lower *pelvic diaphragm*, and that this pelvic diaphragm is anatomically the adjunct and coefficient of the upper or true diaphragm of the respiratory apparatus. This fact is of value in estimating the importance and significance of pelvic lacerations. It should be remembered that every perineal tear begins on the inside, or, in other words, proceeds from above downward, from within outward—it happens only as an accident of extreme rarity that there is any important outside tear without a co-existing internal tear. And beside this fact another one is to be placed—there may be most serious internal laceration without any external manifestation, so far as the skin is concerned. There may be so much over-distension of the tissues that all pelvic support is absent without any evidence of real laceration. This sort of a tear bears the same relation to evident laceration as does a free open incision of a muscle to a subcutaneous division of a muscle. Complete perineal laceration is a term usually applied to tears through the sphincter.

These tears are regarded as the most important on account of the discomfort they entail. Women with the sphincter ani lacerated have a miserable existence, though apart from this the other complications and real calamities of pelvic lacerations are often absent. The sphincter may be torn through, and still there may be no sagging of the pelvic contents, no cystocele, and no rectocele, no prolapsus uteri. This fact is explicable: in a distinctly central tear the lateral attachment of the muscles and fascia are uninjured, while the middle junction of the perineal muscles is simply split, divided, or separated, and consequently the support, while diminished, is sufficient to withstand the pressure of the pelvic contents. The resistance of the muscles is diminished—not destroyed. Complete tears, in my opinion, ought to be considered as including all deep fascial and muscle lacerations, either on one or both sides, with a co-existing or non-co-existing sphincter tear, as the case may be.

All these tears should be approached as distinct surgical lesions, to be repaired in the line of their anatomic destruction, and not as cosmetic operations, the object of which is to obtain superficial appearances without regard to completeness and utility. Heaping up of tissue, outside the lines of resistance, and tension or mere thickening of the mucous membrane and skin does not make a true perineum; neither does a set of outside sutures, however much they may draw the parts together, afford any anatomic counterpart of a perineum. From this point of view all the so-called flap-splitting operations for perineal tears are only puckering operations, bringing parts within the sutures that have never been severed, and in many cases taking them out of their proper relations. Flap-splitting operations are really *misleading superficial procedures*. They attack tissues not in the lines of their real rupture, and do not and cannot go to the real origin of the tears. They do not afford an end-to-end adaptation of the torn muscle, but substitute for this a lateral apposition, simulating *end-to-end* restoration, which can be readily demonstrated. The Emmet operation, as originally devised and afterward modified by him, is the foundation for all successful operations on the lacerated perineum, either with or without *sphincter* tear. This, it is to be remembered, is always an inside operation.

Even in sphincter tears, two or three outside stitches are all that in a majority of cases are necessary. Its so-called modifications are extensions only of the original idea of Emmet, and are only original in the use of a greater denudation, with a consequent increase in the number of stitches.

The loss of tissue objected to in the Emmet oper-

ation is more than equaled or compensated for by the lateral apposition. Moreover, it is to be kept in mind that the sphincter is a distinct anatomic unit—and that any flap-splitting which attempts to repair this, together with other laceration, is over-reaching itself and attempting too much in its efforts at one time to repair distinct lesions. When the fascia is injured, in addition to the sphincter tear, the injury is to be remedied by the ordinary Emmet operation. This operation, by its denudation, brings into relation large triangular levels on one or both sides, putting into relation the torn ends of the torn muscles. When the sphincter ani is ruptured its torn ends are drawn outward and backward until they lie on a line with the posterior line of the rectum. In other words, the muscle is straightened. The depressions on either side of the anus are caused by the torn ends of the muscle retracting the mucous membrane, thus forming the characteristic dimples.

The denudation should be made so as to expose the cut ends of the muscle on either side, and continued upward into the bowel as far as the laceration extends, between the rectum and vagina, into the rectovaginal tissue. Two sets of sutures are to be used ordinarily. The first is the deep-set vaginal, and restores the rectovaginal septum, bringing the parts into the relation they would assume were there no sphincter tear, while the other sutures are introduced as in an ordinary or fascial tear. The rectal or vaginal sutures are, of course, the first to be introduced. If catgut is used for the closure of the bowel, their method of introduction is left to the choice of the operator. If silk, silver wire, or silkworm-gut is used, the sutures must be introduced so as to be tied, twisted, or shotted on the vaginal side. After the tear into the rectovaginal septum has been closed, attention must be given to bringing the ends of the sphincter accurately into apposition. For this purpose the needle must be introduced at the edge of the torn muscle, directed upward, then backward, to the internal edge of the muscle, so as to bring the retracted central portions to a level. If this procedure is adopted on both sides, a flat surface of muscular tissue is obtained and the apposition will be complete. Failure of this operation is easily discoverable. If a fistula persists, there is generally a more or less complete failure of the operation, and the desired effect is not obtained.

To insure the complete success of the operation, extreme care is necessary to restore the bowel and to treat the sphincter as an integral portion of the bowel, bringing the sutures down so as to leave no pocket between the bowel proper and that portion into which the sphincter is inserted.

The instruments formerly suggested as the es-

entials for perineal repair, of which the Peaslee or Baker-Brown needle may be taken as the type, have no place in the delicate scientific surgery of these parts. Big sutures, heavy ligatures, clumsy instruments have no more place here than in other surgery. The ordinary short, strong sewing-needle serves the purpose fully in most cases, though the Emmet strong, fine, short needle for general use is preferable. Silkworm-gut or silver wire are the preferable sutures. These, with a needle-holder without lock, shot-compressor and tenaculum, are really the only instruments required. Here, as in all surgery, few and simple instruments serve best.

CONDENSED MILK; ITS USES AND LIMITATIONS IN INFANT-FEEDING.¹

By CHARLES GILMORE KERLEY, M.D.,

OF NEW YORK;

LECTURER ON DISEASES OF CHILDREN IN THE NEW YORK POLYCLINIC; ASSISTANT ATTENDING PHYSICIAN TO THE BABIES' HOSPITAL.

THROUGH the ignorant use of condensed milk as an infant food, many lives are lost yearly in our larger cities, while, on the other hand, to its intelligent use may be attributed the fact that many lives are saved. In considering the value of any artificial food for infants, we must be governed by one standard—that of mother's milk, the nourishment the child has a right to expect.

An analysis of mother's milk shows that it contains from $3\frac{1}{2}$ to 4 per cent. of fats, 2 per cent. of proteids, and 7 per cent. of sugar. The analysis of a condensed-milk mixture, when diluted for use in the proportion of one part in six of water, gives us 1 per cent. of fat, 1.2 per cent. of proteids, and 8 per cent. of sugar, a greater part of the latter being cane sugar. It is extremely rare, however, that we meet with a child that is being fed on so strong a mixture, for the reason that it will almost surely produce colic and indigestion. The condensed-milk-fed children who come under my care are being fed, as a rule, on a mixture diluted to one in twelve or one in fourteen. The one-in-twelve dilution gives a mixture containing 0.5 per cent. of fat, 0.6 per cent. of proteids, and 4 per cent. of sugar. Comparing this with breast-milk, it may readily be seen how inefficient it must be for a permanent diet. Even if the one-in-six dilution is given, it will still be inadequate.

Apparent as the shortcomings are, many children will do comparatively well in very early life on the weaker dilutions, that is, one-in-twelve or one-in-fourteen. There is sufficient of the carbohydrate to produce heat, and the proteids, though small in

¹ Read at the Semicentennial Meeting of the American Medical Association, Philadelphia, June 1-4, 1897.

quantity, furnish the requisite amount of nitrogen. The proteid of cows' milk differs from that of woman's milk in chemical composition, and is more difficult of digestion. This we have known for a long time; but there is another important difference: The child requires a smaller amount of the proteids of cows' milk, although the relative nutritional properties of the proteids cannot be exactly determined. This is not a supposition, but a fact that has been demonstrated clinically to my satisfaction, and it helps to explain why infants will do well for a time on condensed milk. Many thrive on the ordinary canned variety, diluted one in twelve, until the third month is reached; then the demands of the system exceed the supply of fat and proteids. If the diet is continued, rachitis and malnutrition of varying degrees will almost always ensue.

Of the many hundred marasmic and rachitic infants that I have had an opportunity to observe, fully ninety-five per cent. had been fed on the meal foods or on canned condensed milk, chiefly the latter. This ill-conditioned class of children, with their starved muscular and nervous systems and catarrhal tendencies, fall an easy prey to the infectious diseases during the entire year, to bronchopneumonia in winter, and to the gastro-intestinal diseases in summer. Notwithstanding what has been said, I occasionally meet with children that have been fed exclusively on condensed milk up to the ninth or tenth month, and that have thrived fairly well. These will usually present some evidences of bone rachitis, although the development otherwise will apparently be normal. These infants are held up to us as evidences of the value of the diet in question, and we hear of a great many more than we see. These isolated instances are to be explained by the fact that there are a few infants whose adaptation to abnormal conditions is so great that they cannot be injured by ordinary improper feeding.

An illustration of this was furnished by the case of a well-nourished one-year-old infant that was brought to the out-patient department of the Babies' Hospital to be treated for bronchitis. Its diet up to the third month had been mother's milk and condensed milk. Since then it had consisted of meat, potatoes, bread, rice, crackers, soup, and condensed milk. Tea and coffee were given when the child wanted a drink, and it had beer on Sundays and holidays. Another case in point: A babe six months of age was brought to the dispensary on account of a sharp attack of diarrhea and vomiting. In addition to medicinal treatment, a diet of barley-water and egg-water was ordered. Recovery followed shortly, and the mother was instructed to gradually resume the former milk diet. I did not see the patient for two

months, when he was brought to the dispensary because of an attack of whooping cough. While being undressed, preparatory to an examination of the chest being made, I noticed that the stomach was enormously enlarged. Upon inquiry as to the cause, the mother replied that she supposed it was due to the large quantity of egg- and barley-water taken. A second gastro-intestinal attack had followed the resumption of a milk diet, and the mother thought it would be easier to keep him well on egg- and barley-water than to keep him ill on milk. He had ingested from five to six pints of this preparation daily, and although rather pale, was strong and active. These children thrived for the same reason that older children sometimes thrive on an exclusive diet of canned condensed milk or of plain meal, but the badly fed children who manage to escape resulting disease because of special powers of adaptation are few in comparison with the number that fail. In short, condensed milk is unsuitable as a permanent infant food, in that it is inadequate to the demands of the growing child.

In spite of what has been said, my out-patients consume hundreds of pounds of condensed milk yearly, and under my direction. If condensed milk is so unsatisfactory a diet, as generally used, when, how, and under what conditions may its use be advanced? To begin with, I employ condensed milk voluntarily under one condition only. I meet with a few delicate infants, usually from two to ten weeks old, who must be bottle-fed, and for whom it is impossible to modify fresh cows' milk. These children are unable to assimilate the proteids contained in fresh cows' milk in sufficient amount to thrive; and under these circumstances I order the unsweetened or canned condensed milk, preferably the former. A dilution of one-in-twelve will oftentimes be borne without inconvenience, and the child will do well for six or eight weeks, when it will be able to digest a modified fresh cow's milk containing a low percentage of proteids. Why the children are able to digest and assimilate the proteids of condensed milk when those of fresh milk will produce illness, I am unable to explain.

I employ the canned condensed milk because I am obliged to do so in the case of several hundred infants each year. I use it among the very poor, the ignorant, and the careless who bring their children to the dispensary, and for this reason: The very poor cannot afford cows' milk at 6 or 8 cents a quart, neither can they buy refrigerators or ice to properly keep the milk. The ignorant cannot appreciate or follow out the instruction as to the dilution and care of the milk. This class also may be included under the first heading. We occasionally

meet with representatives of the careless class in the better walks of life. They insist upon feeding condensed milk to their children against our wishes, their excuse being that such a plan is the easiest to follow. The wives of the American and Irish laborers comprise a goodly number of the indifferent class. The proprietary foods are happily excluded from the uses of the poor, for the reason that they are expensive.

Our only resource the year round with many infants is the sweetened canned condensed milk. It is inexpensive, it will keep sweet several days in hot weather without ice, on account of the added amount of cane sugar, and it is easy of administration. Having this preparation with its imperfections forced upon us, how are we to use it? We have seen from the chemical analysis that the percentage of proteids and fats is low. We would not expect children to be properly nourished on it, and clinically we know that they are not. In the feeding of infants the percentages constituting a proper diet should ever be borne in mind, and as nearly as possible correct formulæ should be worked out on this basis. We must supply to the condensed-milk-fed infant the deficient amounts of fat and proteids. If the parents of the patient are well-to-do, cream may be added in proper proportion to make up the requisite amount of fat. Among dispensary patients, cod-liver oil supplies the deficiency. The dose must vary according to the age, the ability of the child to digest it, and the season of the year. I prescribe from 10 drops to a dessertspoonful, three or four times daily after feeding. As a rule it is taken readily. During the very hot weather the dose must be reduced or the oil discontinued if there are evidences of gastro-intestinal disturbance.

The proportion of proteids will still be low, but they may be increased by adding the condensed milk to a meat broth. One pound of lean beef is boiled in one quart of water until the liquid is reduced to one pint. It matters little what portion of the animal is selected so long as lean muscle-fiber is used. The broth prepared in this way, according to the analysis of John S. Adriance of New York City, contains 0.8 of 1 per cent. of proteids; so that if one part of condensed milk is added to twelve of broth, the mixture will contain 0.5 per cent. of fat, 1.4 per cent. of proteids, and 4 per cent. of sugar. This will answer for a child of three months of age. Fat is supplied by the use of cod-liver oil. When the sixth month is reached, one part of condensed milk may be added to nine of broth. The percentages then will be, approximately, .75 per cent. of fat, 1.7 per cent. of proteids, and 5 per cent. of sugar. This, with cod-liver oil, will answer until the

eighth or ninth month, when the critical nursing period will have been passed and barley and oatmeal gruel, with other meal mixtures, may be allowed.

The conclusions arrived at are as follows:

1. In the artificial feeding of infants, always determine as exactly as possible the percentages of the food constituents.
2. Condensed milk alone is an indifferent substitute for mother's milk, no matter what the age of the infant may be.
3. Condensed milk alone should not be given after the third month.
4. Condensed milk, fortified, may be made an acceptable diet for infants; alone, it is a food upon which a certain number of children exist until age or changed conditions allows of a better diet; and inasmuch as there is nothing to take its place among the very poor, its value to them is inestimable.

CLINICAL MEMORANDA.

THREE CASES OF OBSCURE LARYNGEAL DISEASE—TUBERCULOSIS, SYPHILIS, EPITHELIOMA.

BY CHAS. H. KNIGHT, M.D.,
OF NEW YORK.

CASE I. *A Case of Tuberculosis of the Larynx Simulating Malignant Disease.*—A man, about sixty years of age, came to my clinic at the Post-Graduate Hospital in October, 1896, presenting many of the features supposed to be pathognomonic of laryngeal cancer. The left half of the larynx was involved. It was infiltrated and immobile, and a smooth, reddish, sessile tumor projected into the cavity of the larynx from the left ventricular band. There were two or three small, hard, and sensitive glandular swellings at the level of the larynx near the anterior border of the left sternomastoid muscle. The left ala of the thyroid was sensitive to pressure, and the patient complained of spontaneous pain shooting up to the left ear. There was no tuberculous history. I made a provisional diagnosis of malignant disease. Within a few days suspicious pulmonary signs were reported, a little later tubercle bacilli were found in the sputum, and in the course of a week or ten days the right side of the larynx was invaded. Both arytenoids became infiltrated and clubbed, and an ulceration could be seen upon the laryngeal surface of the epiglottis, which itself had become symmetrically thickened and turbanned. The laryngeal picture was then almost typical of tuberculosis. This patient has since died of general tuberculosis. Such an anomalous development of tuberculosis in the larynx as this is extremely misleading, and in a younger subject might encourage unwise surgical intervention, especially if the progress of the disease is less rapid and the exhibition of unmistakable symptoms more tardy.

CASE II. *A Case of Tuberculosis of the Larynx Complicated by Latent Syphilis.*—In September, 1895, a gentleman was sent to me with a diagnosis of pulmonary

tuberculosis. He had been losing flesh, having night sweats, and was annoyed by a hacking cough, with considerable expectoration. His voice had been very husky for several weeks. Four years ago this patient had an attack of gonorrhea and an ulcer of the frenum, which healed promptly under calomel powder. No secondary symptoms were ever discovered, and no antisyphilitic internal medication was given. The larynx was rather hyperemic. The arytenoids were distinctly clubbed. A somewhat superficial ulcer involved the left margin of the epiglottis and the adjacent aryepiglottic fold. No tubercle bacilli could be found in the sputum. A month later this patient returned to me with all his symptoms aggravated and with decided extension of the local lesions. Tubercle bacilli were found in numerous specimens of sputum examined. He was advised to go at once to Southern California. Improvement began immediately after his arrival there, but presently he became worse again. In the course of four months an ulceration appeared on the posterior wall of the oropharynx, so suspicious in character that his attending physician put him on mixed treatment. At the same time the ulcerated surfaces in the pharynx and larynx were sprayed with a ten- to fifteen-per-cent. solution of lactic acid. The dose of iodid of potash was gradually increased to 40 grains three times a day, and under this treatment all the symptoms underwent marked amelioration. The ulcers healed, the swelling of the arytenoids subsided, and the voice was gradually restored. At the same time a rapid and surprising improvement in the general condition took place.

At the expiration of a year this patient presented himself to me for examination in apparently perfect health. No traces of his old trouble could be detected, except certain cicatricial bands crossing his posterior pharyngeal wall which were positively characteristic of old syphilis. He has resumed the practice of his profession in the East, and up to the present time has had no recurrence of the symptoms. Several questions difficult to answer are suggested by the foregoing case. They relate to the time and mode of syphilitic infection and to the influence of that accident upon the tuberculous disease. The evidence of the existence of each of these dyscrasias seems to be indisputable. There is but little doubt in my own mind that the sore referred to as having occurred in 1894, although very insignificant and of short duration, was a genuine infecting chancre. As often happens in such cases, early secondary symptoms, if they develop, escaped detection because of the very unimportance of the primary lesion. The arrest of the tuberculous process may be fairly attributed to change of climate, but it seems not unreasonable to assume the possibility of an antagonism between the tuberculous and the syphilitic diatheses which might have a mutually modifying influence.

CASE III. A Case of Epithelioma of the Larynx Disguised by Marked Remission of Symptoms.—The patient was a lady about forty years of age who came under my observation in April, 1896. Fourteen months before she had noticed an enlarged gland on the right side of her neck, and her voice became husky. She had attacks of violent paroxysmal cough, after which the sputum, which

was generally moderate in amount, would be streaked with blood. There was some pain in swallowing, and a constant feeling of discomfort in the region of the larynx. There had been some loss of weight, ten pounds in a year, but no marked decrease of strength. The general condition was on the whole pretty good. Six weeks ago a tumor was discovered springing from the right vocal band. At the time of my examination this tumor, which concealed and seemed to involve all but the anterior third of the right vocal band, was somewhat pale in color, and had an irregular surface. The ventricular band, the aryepiglottic fold, and the epiglottis on the corresponding side, were thickened, and the right side of the larynx was motionless. The left side was normal. I removed a piece of the projecting tumor, under cocain, with Mackenzie's laryngeal forceps, and the specimen was pronounced an epithelioma. The patient was at this time seven-months pregnant, and it was decided to postpone operative interference. After her confinement, which was free from complication, she made very marked improvement. The slight sense of dyspnea, which had previously existed, entirely disappeared. Her voice was regained sufficiently to enable her to sing in a low tone. A few weeks later she had an attack of pleurisy, with effusion on the left side, from which she seems now to have entirely recovered. Her present condition is one of comparative comfort. The laryngeal tumor is reported not to have increased in size very much during the past year. The enlarged cervical glands are still noticeable, but are much smaller than they were a year ago. At times she suffers a great deal of pain in swallowing, and coughs immoderately. There is no fetor to the breath, and the secretions from the larynx are not excessive. When lying in certain positions she suffers some inconvenience from obstruction to respiration, but otherwise she has no dyspnea. Her pain has never been severe enough to require anodynes, except the occasional use of a four-per-cent. solution of cocain as a laryngeal spray. The question of operative interference was left to the decision of the patient herself and of her husband, who is a physician, and the conclusion seems to be that she is quite as well off to-day as she would have been without a larynx, had she survived the operation.

In spite of the fact that many of us may have had the unhappy experience of being misled on certain occasions by the microscope, these cases served to impress upon me the importance of subjecting all of our laryngeal neoplasms to microscopic examination, more especially those occurring at and after middle life. Otherwise, in most cases, we have no means of making a positive diagnosis of incipient cancer of the larynx. In the absence of definite microscopic testimony, we shall be forced to reach an opinion by exclusion. Late cases are generally characteristic, but the early stages of malignant disease present no objective appearances which may be safely relied upon for diagnosis. The development of the Röntgen ray as a diagnostic resource is awaited with interest. It seems reasonable to expect that it may eventually give us valuable information as to the extent of the infiltration and the limits of a diseased area.

With regard to laryngectomy, I am disposed to class myself with the opponents of *complete* extirpation. When the disease has so far advanced as to demand such radical procedure, the case is well-nigh hopeless. By the time the whole larynx, or a large part of it, is involved, the disease has presumably disseminated itself far beyond the boundaries of any feasible operation. The involvement of glandular structures, remote as well as in proximity to the larynx, renders recurrence at the site of operation or elsewhere almost inevitable. No doubt the statistics of laryngectomy are becoming more favorable with improvement in technical details of the operation and of after-treatment. Nevertheless, it seems to me that in order to reach a just conclusion as regards extirpation of the larynx in a given case, we have to consider another question than that of statistics, namely, the temperament of the individual upon whom it is proposed to operate.

To a person of stolid, phlegmatic disposition, the loss of the larynx is of much less consequence than to one of sensitiveness and refinement. To the latter deprivation of the power of speech becomes almost insupportable, and the kind of speech without a larynx acquired by some of these unfortunates, as in Cohen's famous case, in one more recently reported by Ward,¹ and in several others, or that provided by the various ingenious substitutes for the normal larynx, offers very poor consolation. It has been my misfortune to observe several cases of laryngectomy in which the patient lapsed into a morbid mental condition bordering upon suicidal melancholia. Whenever the question of operative interference arises it would seem wise to take this matter into consideration.

My object in briefly reporting these three cases is first to call renewed attention to the difficulty of making a diagnosis from the clinical history and the objective appearances, and to insist upon the importance of the microscope as an diagnostic adjuvant even in apparently innocent cases; in the second place, to remind you of the possible concurrence of several pathologic conditions; and finally, to protest against indiscriminate operating in malignant disease of the larynx.

A NOTE ON THE PATHOLOGY OF COMPLETE OR ANNULAR PROLAPSE OF THE URETHRAL MUCOUS MEMBRANE IN WOMEN, WITH THE REPORT OF A CASE.

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In a former communication on "Complete or Annular Prolapse of the Urethral Mucous Membrane in Women,"² I reported three cases, and stated that the results of the microscopic examination of the last two cases (this unfortunately was omitted in the first) would tend to confirm the opinion that the cases described as "complete prolapse of the urethral mucous membrane" are rarely, if ever, instances of true primary prolapse of this membrane, but that is secondary to some neoplastic change in

the membrane, the most usual being, according to the investigations of C. Ruge and Martin, an angioma. In further support of this statement I now report the following case which has recently come under my observation:

Miss G., aged fifty years, a nullipara five years past the menopause, came to me complaining that during the previous six months she had been suffering from intermittent hemorrhages from the genitals. The bleeding on several occasions had been quite profuse, amounting once, in her opinion, to almost a pint. During the intermissions she had noticed a profuse watery, sanious discharge which of late had become very offensive in odor. Urination recently had become more frequent and caused considerable scalding in the neighborhood of the external meatus both during and after the act. For two years she had noticed a slight swelling occupying the orifice of the vulva, but, as it did not give rise to any serious inconvenience, she did not consider it necessary to consult a physician. Recently, however, the tumor had increased in size and her sufferings had become so marked that she was compelled to seek relief.

Examination revealed a tumor about the size of a large English walnut, of deep purple color, projecting between the labia majora and filling up the vulvar orifice. About the center of the tumor at its most projecting point was situated the external orifice of the urethra, widely dilated so that the little finger could be passed through it for the distance of about half an inch. On the posterior aspect, some little distance below the urethral opening, was a small gangrenous area about the size of a dime. The growth was removed in the following manner: A circular incision was made through the mucous membrane around the base of the growth. Then deciding that it would be necessary to remove a portion of the mucous membrane of the urethra also, as the diseased condition affected it, another incision, commencing at the most dependent point of the first and involving only the mucous membrane, was carried up along the anterior wall of the vagina in the long axis of the urethra for the distance of half an inch. The urethra was now dissected out, as in Gersuny's operation for incontinence, almost to the neck of the bladder. The tumor was removed, with about a third of the urethra proper, and the cut surface of the urethral mucous membrane drawn down and fixed externally by means of interrupted sutures of fine silkworm gut. The operation was completed by closing the longitudinal incision in the anterior vaginal wall with several sutures of the same material. A soft rubber catheter was inserted and allowed to remain during the first two days after the operation. The sutures were removed on the seventh day, when complete union was obtained, and the patient left the hospital two weeks later, since which she has had no further trouble.

Microscopic examination of the growth proved it to be an angioma. Its free surface was covered by an epithelium similar in structure to that normally found in this location. From this epithelium somewhat dilated and hypertrophied glands passed down into the subjacent tissues. Beneath the epithelial covering and surrounding the glands was considerable round-celled infiltration of an inflammatory character.

¹ *Trans. Clin. Soc.*, xxix, 1896.

² *Trans. Roy. Acad. Med.*, Irel., vol. ix., p. 304.

INTUSSUSCEPTION IN AN INFANT SIX MONTHS OLD, WITH DEATH IN TWENTY-FOUR HOURS.¹

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BABY A. was born March 29, 1896. He had but little difficulty in making his entrance into the world, and the only trouble he found in life was that his mother could not supply him with enough to eat. But this lack was repaired by cow's milk, modified by the Rotch formula, and on this food Baby A. steadily gained in size and weight, until an accident occurred which suddenly and tragically put an end to his life.

This accident took place on September 26th, when the baby was just six months old; and it came like a thunder clap from a clear sky. At nine o'clock on the morning of that day, he took his food as usual, about four ounces in amount; at twelve o'clock he had a natural and free evacuation from his bowels; but at two o'clock he commenced to cry as if in pain, though previously playful and contented all day. He cried incessantly about an hour and a half, then vomited freely. He continued to vomit at intervals all the afternoon and evening, and between times appeared to be nauseated and in pain. He refused all food until late in the evening, when he was persuaded to drink part of his bottle of milk; but almost immediately afterward this was ejected.

So the nausea, vomiting, and whimpering continued without other symptoms, until one o'clock on the morning of September 27th, when the baby had a peculiar passage from the bowels. This was the first passage since noon, and was peculiar in that it contained a small amount of blood, considerable water and some flakes of mucus, but no fecal matter. Now for the first time the parents became sufficiently alarmed to summon a physician. I saw the baby about 2 A. M., and was at once shown the napkin containing the bloody discharge. The passage was not large—could not have been over an ounce in amount, and was pale red in color, indicating that only enough blood had intermingled with the watery evacuation to give it a tinge. The baby at that time was apparently not in great pain, but fretful and moaning occasionally, sometimes dropping asleep, sometimes perfectly quiet when awake. He made frequent attempts at vomiting without anything coming up, but there was no straining or tenesmus as if the bowels were inclined to move. His pulse was 140, his temperature per rectum 102½° F.

Look now at the differential diagnosis of this case. Except the bloody passage from the bowel, every symptom spoke of an attack of acute gastric indigestion. The sudden onset with pain, followed by vomiting; the continued retching and nausea, with pain and refusal of food; the moderately elevated temperature and high pulse-rate, were all characteristic of acute indigestion. Furthermore, the history supported this diagnosis; for the last food given and retained, at nine o'clock on the morning of

September 26th, was part of the amount prepared nearly twenty-four hours before. The weather at that time was quite hot, and it appeared more than likely that the food had undergone fermentation before the baby took it, and so had caused the symptoms present. On the other hand, the passage containing blood at once created suspicion of intussusception; a suspicion strengthened by the mode of attack—acute onset with pain, followed by vomiting, and with continued pain and nausea as the prominent symptoms. With this suspicion in mind I carefully palpated the abdomen, but could find no tumor, and made digital examination of the rectum, but could detect nothing abnormal there. The diagnosis certainly lay between these two conditions—acute indigestion and acute intussusception; one very common, the other rare; one due to a cause here manifestly present, the other without any cause apparent in the history of the case; one comparatively simple and benign in its course, the other with an outlook most forbidding. Without certainty to guide me on either hand, I accepted the explanation most probable and made a diagnosis of indigestion. I prepared and gave an enema of starch water containing twenty drops of paregoric, with instructions to repeat this in four hours; applied a mustard paste to the abdomen, and ordered all food to be withheld absolutely and no drink to be allowed but egg water.

At nine o'clock the next morning I found to my surprise that the baby was decidedly worse. He had had but little respite from pain, in spite of the opium, and had kept up almost constantly the nausea and retching, without ejecta. There had been no further passage from the bowels, of any sort. His pulse was now too quick and thready to be counted readily; his temperature per rectum was 105½° F.; his eyes were sunken and his pallor marked. Again careful examination by abdomen and rectum were made, but no tumor could be detected. Still of the opinion that the case was one of indigestion, I explained the alarming symptoms to myself as those of intoxication, due to the fermenting and poisonous milk locked up in the bowels. I have seen similar effects produced by this cause before and since this case. Acting on this theory, I at once changed my plan of treatment, stopping the paregoric and ordering instead one-tenth of a grain of calomel every hour until the bowels moved. At the same time, realizing the gravity of the situation, I asked for consultation, and permission being granted, agreed to see the baby again with a consultant in the afternoon.

It was one o'clock before I returned to my office, and there I found the father of the infant waiting for me. He stated that the baby had just had another bloody passage, and in proof showed me the napkin he had brought along. Convinced by this that the case after all must be one of intussusception, I hastened back with him to his home. There had been a third passage of blood and mucus, without fecal matter, just before we arrived, and when we reached the house the baby's condition was critical; the pulse was imperceptible and the countenance showed that death was imminent. Even at this time I could make out no tumor by abdomen or rectum, but the re-

¹ Read before the San Francisco County Medical Society, April 13, 1897.

peated bloody discharges from the bowel left no doubt as to the diagnosis. Faithful efforts were now made to reduce the intussusception by high injections into the bowel, but it was too late. The baby died at 2:45 P. M., barely twenty-four hours after he was taken ill.

Permission to open the abdomen was granted by the parents, and I made this partial autopsy next day at noon. I found the ileum pushed down into the cecum, through the ileocecal valve, for three inches of its extent, and so firmly caught there that considerable force was required to release it. Above the point of obstruction there was a quantity of thin, pearly fluid, containing flakes of coagulated casein.

Intussusception is not infrequent in infancy; in fact, statistics show that of all cases occurring under ten years of age, one-half occur between the fourth and the ninth months of life. This is explained by the anatomic peculiarities of the intestine in infancy; its walls are thin and lax and its mesentery flabby so that more motion is allowed than in adult life. Yet these conditions after all act only as a predisposing cause, and the exciting cause is usually obscure. Pre-existing intestinal disorders accompanied by straining, such as constipation or dysentery, are apt to bring on intussusception; but the great majority of cases, like the one reported, occur in infants whose previous health was apparently perfect. The only explanation is therefore this: because the intestinal tube is lax and flabby, it is easy for one part to be carried down by peristaltic action inside the part beyond, especially when the part beyond is wider in its lumen, as at the junction of small and large intestine; and about seventy-five per cent. of the cases of intussusception in infants occur at the ileocecal valve. In the case reported it seems likely that the food had undergone fermentation before its ingestion, as explained; and that this irritating food, by increasing the force of peristaltic movements, was the immediate cause of the accident. No doubt indigestible food, acting as an irritant, and so setting up unusual peristaltic waves, is a common cause of intussusception in infants.

The prognosis of this affection in infants is always grave in the extreme. The most favorable statistics place the mortality in cases under one year of age at sixty per cent. It is unusual, however, for death to occur so early as in the case here reported. In forty-nine cases collected by J. Lewis Smith and recorded in his work on "Diseases of Children," only two died in twenty-four hours from the onset; and out of ninety-two fatal cases collected by L. Emmet Holt and very recently reported in his work on "Diseases of Children," there were only two that died in twenty-four hours. The average duration of fatal cases is three days, and the great majority die within a week.

Thus it is seen that intussusception in infants generally occurs without warning and is terrible in the suddenness with which it kills. What is to be done for it must therefore be done quickly, and this implies prompt recognition of the trouble. The typical and diagnostic symptom is the passage from the bowel of bloody liquid and mucus, containing no fecal matter. Another time, on the first

appearance of such a discharge from an infant's bowels, with a history of vomiting and pain preceding, I shall at once treat the case for intussusception, without waiting for a tumor, or tenesmus or other classical signs. The only treatment of any use is mechanical. The invagination must be released by pressure from below. This can frequently be accomplished by injections through the rectum; but if these fail, the only resort is laparotomy and manual reposition.

Injection is to be made with a fountain syringe and warm water. The infant should be anesthetized, the hips elevated 45° and the syringe-bag raised well above the body to secure sufficient pressure. It has been estimated that the elevation of the receptacle each two and a half feet will add one pound pressure to each square inch. If the bag is held five feet high, as usually advised, a pressure will thus be exerted on the bowel of two pounds to the square inch. This pressure should be kept up for twenty to thirty minutes, the fluid meanwhile being retained in the bowel by pressing the soft parts tightly around the syringe-nozzle. If not successful the first time, it should be repeated once or twice, but not more, after allowing an hour's interval for rest. There is nothing, as a rule, to show at once that reduction has been effected; only by the occurrence of a normal evacuation from the bowels shortly after injection and by relief of the general symptoms, is proof furnished that the obstruction has been removed.

Laparotomy is indicated as soon as a thorough trial of reduction by injections has proven unsuccessful. The history of the case reported shows the necessity for despatch. Hours are precious, and no time should be lost in resorting to operation when other measures have failed. The earlier it is performed, the greater the hope that it will succeed. But the most distressing obstacle in the way of success by any method of treatment, is the failure to make a correct diagnosis until it is too late.

MEDICAL PROGRESS.

Manual Rectification of Faulty Head Positions.—FRY (*Am. Jour. of Obstetrics*, March, 1897), in a paper read before the Washington Obstetrical and Gynecological Society, advocates in the strongest terms the manual rectification of faulty head positions. "Let us recognize the fact," he says, "that tardy labors can be terminated speedily and successfully by other means than by forceps."

Special reference is made to cases of occipito-posterior and other faulty head positions, where the woman is suffering from impaired vitality or chronic disease, in which case a prolonged second stage, with forcible contractions, is much to be dreaded. Numerous rules are given for the rectification of the various malpositions, differing according to the degree of descent of the head, *viz.*, above the superior strait, in the pelvis, or at the outlet. Certain rules are common to all cases. The patient should be anesthetized, placed on the edge of the bed, with thighs and legs flexed, thorough aseptic and antiseptic precautions observed, and the hand introduced during the absence of a contraction. All manipu-

respirator. Green also strongly advises its use in the early stages of tuberculous disease of the lungs, together with the ordinary tonic, hygienic and dietetic treatment. Under its use he noted a decided improvement in the patient's condition, and a marked decrease in the tubercle bacilli, and other bacteria in the sputum. For inhalation in acute cases the formalin should be diluted with water as the undiluted vapor is too stimulating.

The Value of Sterilized Milk.—It is claimed by scientists that the sterilization of milk not only destroys the pathogenic bacteria but also many beneficial micro-organisms. BARTON (*Brit. Med. Jour.*) thinks that in view of the enormous saving of infant life since the introduction of milk sterilization an opposite view should be taken. After carefully studying the subject he makes the following statement:

1. Completely sterilized milk, if administered without any fresh food, will undoubtedly sooner or later produce scurvy.

2. Milk that is raised to the boiling point, or better, to within two degrees of the boiling point, and maintained there from five to ten minutes, is "comparatively" sterilized, and will never produce scurvy, and is almost free from pathogenic organisms.

3. Completely sterilized milk, if administered at once in perfectly clean bottles, spoons, or cups, can be relied upon as being free from any pathogenic micro-organisms.

4. The heating of milk alters very little, if at all, its nourishing qualities.

5. All kinds of sterilized milk, if free from added chemicals, can become foul as quickly, if not more quickly, than ordinary fresh milk.

6. All sterilized milk that is put into hermetically sealed vessels, and which can keep fresh in them for many days, will produce scurvy unless some fresh food is administered daily.

7. Milk that is boiled directly over a fire will undoubtedly cause constipation. If the milk be placed in a vessel which stands in another vessel containing water, and the water be brought to the boiling point, its antiscorbutic properties are not lost, and it does not cause constipation.

Plea for Less Restricted Diet in Typhoid Fever.—To mitigate the evils of extreme emaciation, feebleness, and prolonged disablement, BARRS (*Brit. Med. Jour.*, January, 1897) urges a diet of solid food whenever the patient is able to take it and expresses a desire for it, even if the temperature curve is above the normal and the bowels are acting too frequently. If the stomach is digesting, the proper kind of solid food will reach the typhoid lesions in the same state of fluidity as would milk; if the stomach is not capable of digesting simple solid food, the patient will have no appetite, and it would be foolish and cruel to force solids upon him.

He believes a majority of typhoid patients die from cardiac failure, lung complications, and other devastating effects of general infection, against which the patient can set only such powers of resistance as he possesses,

and which will be more or less effectual according as his general nutrition is maintained by good food. The conditions for healing in the small intestines are the same as for any of the external parts of the body, and no surgeon would expect to see wounds undergo repair in the shortest possible time in a patient living on fluid diet alone.

The Uses of Suppositories in Children.—Owing to the sensitiveness of the digestive tract in children, and the ease with which its condition may be disturbed by medication, a writer in *La Médecine Moderne*, April 28, 1897, makes a plea for the more extensive use of medicated rectal suppositories. The medicine in these suppositories must be in a state capable of rapid and complete absorption, and the vehicle also must be considered. Cocoa butter does not remain sufficiently long *in situ*. The ideal vehicle is found in a mixture of gelatin and glycerin, recommended by Chaumel. To take a practical illustration: In the case of a nervous, excited child, a suppository containing cocain or antipyrin is introduced, and in a short time its calming antispasmodic effect is produced—both systemically and locally at a portion of the intestinal tract where irritation often exists—and without disturbing in the least degree the stomach and intestine.

Kryofin—A new Antipyretic.—In the *Deut. Med. Wochenschrift* for April 22, 1897, EICHHORST describes his experiments with a new antipyretic called kryofin. Chemically, this drug is closely allied to phenacetin. It occurs as white, odorless, tasteless crystals, soluble in 52 parts of boiling and 600 parts of cold water. The solution has a sharp, bitter taste. The usual dose is 7.5 grains, and the antipyretic effects of this amount are greater than those obtained by 15 grains of phenacetin. No unpleasant symptoms have been observed to follow its use. In addition to its antipyretic action, kryofin has been found to have an analgesic power, and is used with benefit in sciatica and in alcoholic neuritis. In acute and chronic articular rheumatism it failed to relieve the pains.

A Physician's Method of Inducing Sleep.—In the *Chicago Medical Recorder* for April, 1897, LEARNED tells how he has been able to overcome insomnia. The respirations are reduced from 18 to about 12 per minute, made full, deep, and regular, and the attention is concentrated upon them. During this time the head is raised from the pillow a half inch or so and kept in that position until the sustaining muscles are exhausted. This usually occurs after fifteen or twenty respirations. The head is then lowered, the muscles of one leg made rigid, and the foot raised. When the leg becomes tired the same process is repeated with its fellow, the respiratory counting being kept up. The body is then turned on the back or the other side, and without loss of time head and feet are elevated as before. In a short time fatigue becomes so well marked that the brain is glad to "let go" and sleep ensues.

This method has one drawback. It is a continuous effort and is, therefore, not attractive for the indolent. To be successful no rest must be allowed at changes of position.

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A WEEKLY JOURNAL
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No. 111 FIFTH AVENUE (corner of 18th St.), NEW YORK.

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LEA BROTHERS & CO.,
No. 111 FIFTH AVENUE (corner of 18th St.), NEW YORK,
AND NOS. 706, 708 & 710 SANSON ST., PHILADELPHIA.

SATURDAY, JUNE 5, 1897.

THE SEMICENTENNIAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

It has been said that for a nation to feel that it has a past and a history is a wonderful encouragement to the growth of its moral forces. What is true of nations is true also of associations. The American Medical Association has now reached and passed the golden milestone of its existence. That it has a past and a history of which its members may be justly proud was convincingly presented in the brilliant address of the President, Dr. Senn.

Great achievements and a noble record, however, increase the responsibility of the present. Each annual meeting is an epoch-making event in the history of the Association, and it therefore becomes a pertinent question to inquire what this semicentennial meeting has contributed that is worthy of the organization and of the event. Naturally, the anniversary feature has been prominent. It was a time for reminiscence, for mutual congratulation, for recalling the achievements of the past and forecasting the future. Much time was spent in this agreeable way, and with apparent satisfaction. Dr. Senn presented an exalted picture of the American medical education of the future, and of the rapidly improving institutions for medical education that were destined, even

in this generation, to become the finest in the world and to attract students from nations now supposed to be the centers of medical progress. In all fairness, his prediction seems to find justification in the tendency among rival schools to consolidate their resources and in the generous appropriation of large sums of money to build, equip, and endow pathologic and bacteriologic laboratories.

Dr. Flint's Address on Medicine was a thoroughly scientific paper, and a vigorous reminder of the fact that the Association numbered in its membership men capable of conducting the most original scientific investigations and making important physiologic discoveries in unknown fields. It will doubtless prove somewhat of a surprise to our German friends to learn that they have but recently been rediscovering a physiologic product originally discovered and named by an American thirty-five years ago. The importance of consulting American medical literature was thereby also emphasized.

The brilliant contributions of American Surgery to the world's storehouse of knowledge was graphically portrayed by Dr. Keen in the Address on Surgery—and the presence of the venerable founder of the Association Dr. N. S. Davis and his active participation in the anniversary proceedings was a feature of unusual interest and suggested the thought that the sturdy founder typified the stanch material of which the Association was composed.

The Rush Monument Fund now seems in a fair way of being completed in a reasonable time. Small contributions from the many is far better than larger subscriptions by a few. As Dr. Wood said in his eloquent appeal for opposition to the Antivivisection bill now before Congress, what is needed is individual personal effort on the part of the humblest member of the profession and the object is accomplished. Set the machinery in motion to promote this in State, county, and town societies and there is no reason why the complete fund shall not be realized before the next annual meeting.

The attendance was greater than of any previous meeting in the history of the Association and the interest manifested in the scientific and public exercises was gratifying to a high degree. Philadelphia surpassed herself in the hospitality extended, and her guests were made to feel that she is indeed a city "which has the minimum of tenements and

the maximum of homes exhaling an air of hospitality." Luncheons, receptions, and dinners abounded on every day and on every hand. Not the least appreciated among the entertainments was the theater-party given by the publishers, Messrs. Lea Bros. & Co., on Thursday evening, the size of which was limited only by the seating capacity of the theater. For a period covering four generations it has been the privilege of this house to enjoy the closest relations with the members of the medical profession. It is needless to say that the *entente cordiale* has at least not been lessened by this act of generous hospitality.

THE CONTROL OF VENEREAL DISEASES.

THE increase of gonorrhea and syphilis among the British troops in India has recently been noted in these columns. How the problem presented will be dealt with by the British Government does not yet appear, but the question is exciting continued interest both in the lay and medical press, and those who are strongest in their opposition to the Contagious Diseases Acts still admit the necessity of some kind of remedial legislation. As stated in a previous article their objection to this law aside from sentiment is based upon the fact that the most careful examination of a woman sometimes fails to show her capacity as a source of infection. It is also suggested that when the number of prostitutes is greatly reduced by the retention in hospital of those found to be contagious upon examination, disease among the men increases because the women receive so many in one night that they infect each other through the medium of her person even though she herself escapes contamination. To these objections must be added the great danger of clandestine prostitution which exists even under the most perfect legal system, and to which is ascribed a large part of the cases of syphilis which occur in Paris, Berlin, and other cities, where prostitutes are registered and periodically inspected.

Notwithstanding these objections to governmental regulation the fact remains that venereal disease is many times more prevalent in the British Army than it is in any of the Continental armies where this system is the rule. Nor can this be explained by saying that the general health of the soldier has been neglected. Special attention has been given to athletics, exercise, recreation, etc.—in short to the de-

velopment and maintenance of a strong physical and moral condition of the army. General sickness and drunkenness have decreased while venereal diseases have increased. While agreeing with the advocates of official inspection to the extent of regarding syphilis and gonorrhea in the light of contagious diseases, and admitting the desirability of preventing those afflicted with these troubles from communicating them to others, it is impossible to believe in the light of past and present experience that inspection and regulation will accomplish all that is desired. Two remedies alone seem able to remove this scourge. One is the absolute prohibition of women within the camp area—a remedy so drastic is not likely to be advocated in any army, least of all in a British army; for whatever may be said of the religious character of the English people, among the men in the classes from which the soldiers are drawn, morality is not a strong point. Still this plan would only put the men in the army upon the same footing as the men in the navy during long cruises.

The other remedy is to allow a soldier to marry and take his wife with him as far as circumstances will permit. This would necessitate a great increase in the pay roll, would very nearly double, apparently, the expense to India of English occupation, and for financial reasons the plan probably stands absolutely no chance of adoption. Still, it may be worthy of careful consideration whether it will not be cheaper for the English nation to submit to additional expense than be overwhelmed by this wave of venereal disease which threatens to spread over England through the infecting agency of her returning soldiery. Whether other considerations would render it impracticable it is impossible to say. Certainly matrimony has not prevented men from rendering acceptable service as soldiers in time of war and, *a priori*, the same may be true in time of peace.

ECHOES AND NEWS.

Smallpox in New York.—The report of smallpox since the outbreaks on March 1st records forty-six cases.

Skiaographs Not Accepted as Evidence in Court.—Judge Hutchinson refused recently to permit a series of skiaographs to be used as evidence in a damage suit on trial in his court.

Queen Victoria Vaccinated.—Among the many interesting experiences of Queen Victoria recalled by the ap-

proaching celebration is the fact that she was the first member of the English royal family to be vaccinated.

Illinois Vaccination Bill Killed.—By striking out the enacting clause, by a vote of 27 to 10, the Senate of the Illinois Legislature killed the bill providing for the compulsory vaccination of school children in that State.

Women Receive Medical Diplomas.—The twenty-ninth annual commencement of the Woman's Medical College of the New York Infirmary for Women and Children was held May 27th. Sixteen young women were graduated.

Medical Victims of the Paris Disaster.—Of the four men who lost their lives in the disaster at the Bazar de la Charité two were members of the medical profession. At the request of the Academy of Medicine a solemn requiem service was held at the Madeleine on May 15th for the doctors and wives and children of medical men—seven in all—who perished.

Extraordinary Bone Grafting.—A case of bone grafting is reported at one of the hospitals of Buffalo, N. Y., in which five inches of a live sheep's bone has been inserted in a man's leg to replace part of the tibia which had been crushed and destroyed in an accident. The process of attachment and growth is being watched with no little interest through the instrumentality of the fluoroscope.

The Case of Beatty versus Cullingworth.—It is announced that this case is to be re-opened by an appeal to the House of Lords. In commenting on this the *Medical Press* says: "This step is much to be regretted, and the wisdom of those who are finding the money for this further litigation is open to serious adverse criticism. It may be doubted if any single occurrence during the last generation has done more than this trial to strain the amicable relations that should exist between the medical profession and the nursing community."

Medical School Inspection in New York.—The necessity for this work is constantly attested in the weekly reports of the inspectors. The following report has been made for the week ending May 21st. Out of 4510 male and female children examined in the primary departments of grammar schools, primary schools, parochial schools, American Female Guardian Society, and Children's Aid Society, 450 were excluded. There were 5 cases of measles, 8 of diphtheria, 2 of scarlet fever, 1 whooping-cough, 7 mumps, 44 contagious eye diseases, 354 parasitic diseases of the head and body, 4 of chicken-pox, and 17 of skin diseases.

Roll of the University-Bellevue Hospital Medical College Completed.—The New York University Council, at a special meeting held May 26th, eighteen members being present, completed the roll of the professorships of the consolidated medical college by the election to full professorships in the governing Faculty of Dr. E. G. Janeway in medicine and Dr. Frederick S. Dennis in surgery. Dr. A. Flint, Jr., was made Adjunct Professor of Obstetrics and Dr. G. D. Stewart Adjunct Professor of Anatomy. The roll of the governing Faculty now contains twenty-

one members, while the clinical, emeritus, and assistant professorships number twenty-five.

To Protect School Children's Eyes.—The New York Board of Health, in conjunction with the Board of Education, is about to take practical action to prevent the increase of nearsightedness among school children. It is proposed to appoint a corps of twelve trained oculists, each of whom shall look after a given school district. Their duties will be to examine and watch each child and pass upon its sight. Those with good sight will be given rear seats in the class rooms, and those with poor eyes, places where they will not have to strain to see the blackboards, maps, etc. The arrangement of these and the proper lighting of school rooms will be the objects of their attention.

Children in Asylums.—James O. Fanning, the inspector of the State Board of Charities, has submitted a report to the Board of Inspection of the twenty institutions in the Eastern Inspection District. The purpose of the inquiry was to ascertain the cause of commitment, the reason, if any, for long detention, and, when possible and proper, to secure removal to the care and custody of parents, relatives, or friends, and to inquire into the family history of the children committed to the institutions. The inspectors made 133 visits to institutions, 614 visits to families, interviewed 1579 children, and has effected so far the discharge of 302. The number of removals represents a decrease of about \$600 per week in the expenditures of the municipalities named for the support of dependents.

Water in Chicago Schools.—For the first time in over seven weeks the city water was allowed to be used in the public schools of Chicago, it having been shut off by the Board of Health because of its bad condition. It has not improved, but the demand for it became so insistent that the board had to comply. The Health Commissioner declines, however, to take responsibility for the act. His board had ordered the school hydrants equipped with filters, but the Board of Education had refused to buy them, deeming filters of no protection against germs. Then the water was ordered boiled, but the Board of Education refused to do this, because it could not afford the expense. Then the Board of Health shut the water off to the serious inconvenience of the pupils. It has been obliged to yield at last.

Lord Lister.—The British journals are full of accounts of Lord Lister's many honors. One speaks with great satisfaction of the excellence of his maiden speech in the House of Lords, another of his dining with her Majesty the Queen at Windsor Castle, and all of them mention the unique banquet which was to occur on May 26th at the Café Royal, London, at which Lord Lister was to be entertained by all the house surgeons, clinical clerks, and dressers who worked under him at Glasgow, Edinburgh, and London. As an instance of the interest taken in the event it is reported that a former dresser has come all the way from British Guiana to be present, and the oldest of Lister's house surgeons, Dr. Ramsey of Torquay, aged

seventy-three, will be present. The father of antiseptic surgery is evidently being appreciated.

The Skeleton of Professor Cope.—Besides leaving his paleontologic collections and most of his fortune to the University of Pennsylvania and its allied institutions, the late Professor Edward Drinker Cope took care that death should not end the usefulness to science of even his mortal tenement. In accordance with the provisions of his will, only a part of his body was cremated. His brain is to be preserved in the Wister Museum of the university, and in the same place his skeleton will silently continue the instruction to which Professor Cope's life was devoted. The relics of the departed teacher are to be prepared by men who knew him well and often worked with him, and near them in the museum the ashes of his flesh will be preserved in an urn standing beside those containing all that was mortal of two other great men devoted to scientific pursuits—Professor Leidy and Professor Ryder.

The Congress at Moscow.—In connection with the International Medical Congress at Moscow a two-weeks' excursion has been arranged to the Caucasus visiting the celebrated mineral baths of which Kislovodsk is the center, and traversing a region notable for its fine scenery. A nominal fee of thirty dollars will be charged. It is announced that guests of the Congress, including ladies, will pay no admission fee but they will not be entitled to the free railway passes from the frontier stations on the Russian lines, accorded to members. Visiting members may obtain hotel accommodations in advance by applying to Professor Chervinsky of Moscow. It is estimated that the cost of rooms will be about one dollar and twenty-five cents per day. A committee of ladies of Moscow has been formed for the purpose of securing comfort and entertainment for the ladies accompanying the members of the Congress.

Chewing Gum Is Interdicted.—In addition to the injurious effects produced by the excessive overstimulation of the salivary glands occasioned by the habit of gum chewing, the act itself is a breach of good manners. Anent the reprimand administered by one of New York's magistrates to the attending policemen for chewing gum in the court, the *Sun* says: "Gum-chewing, although it isn't positively offensive, like tobacco spitting, is the height of vulgarity. It may be tolerable for athletes who have special need of working their salivary glands in order to keep their mouths moist; or it may serve to soothe the nerves of a billiard player in undergoing the strain of a great match. But it distorts the face, gives it a slatternly and careless aspect, and offends the rule requiring people to finish their dinner before rising from the table. Besides, it very often causes the emission of a nasty sound from the gnashing jaws."

Statistics of New York Dispensaries.—In a report recently submitted to the State Board of Charities Dr. Stephen Smith presented the following statistics: "The number of dispensaries in this city connected with hospitals are 31; with churches or missions, 9; having governing boards, 58; under private control, 7; total, 105. In the

cases of those with governing boards, which are supposed to exercise a strict supervision, there are only 13 whose boards have made daily visits. The boards of 11 have made weekly visits, of 7 monthly visits, of 2 annual visits, while the board of one has visited only four times since incorporation in 1889, of another only five times since incorporation in 1869, and of another, never. Only 47 have a regular board of officers, 20 have only a president, 2 have no officers whatever. In 67 medical or surgical aid is entirely free, in 16 the intention is to charge a small fee, in 8 aid is accounted paid for by benefit to the students present. In only 7 dispensaries is any record of the names and addresses of patients kept, and in only 33 any record of diagnosis and treatment, while in 21 no record of any kind is kept. The worthiness of a case is decided by investigation (generally superficial) at 44 dispensaries, by mere appearance at 18, and at 6 no questions are asked. At 7 patients are charged ten cents or more, if able to pay; at 3 some charge is made for surgical aid, at 11 something is charged for medicines and dressings, at 2 something for board (if able to pay), at 39 from ten to fifty cents for medicines, and at 3 payments are voluntary. The medical staff renders gratuitous service at 51, at 2 the members receive board and lodging, at 15 they are paid from \$25 a month to \$1500 a year. Thirty-seven dispensaries have from 1 to 10 medical attendants, 28 from 10 to 25, 6 from 25 to 50, 2 from 100 to 165, and 1, none. The trustees appoint the medical attendants in 24 dispensaries, individuals in 9, and medical boards in only 18. One dispensary replied that the question on this point was a 'fool question.' At 3 mission dispensaries the medical attendants are appointed by the minister in charge. Examination precedes appointment in only 3 institutions. In 10 the number of persons treated ranges from 80 to 100, in 1 from 500 to 1000, in 28 from 1000 to 5000, in 20 from 5000 to 55,000, and the total number treated in 1895 was 837,971."

CORRESPONDENCE.

THE INITIAL DOSE OF TUBERCULIN.

To the Editor of THE MEDICAL NEWS.

DEAR SIR: In an article written by me which appeared in the MEDICAL NEWS, May 29, 1897, on the tuberculin test, I am made, through a typographic error, to say "The first injection should not exceed five milligrams, whereas the text should read "The first injection should not exceed five-tenths of a milligram."

As the use of a small initial dose is an essential feature of the method I have employed, and as the injection of so large an initial dose as five milligrams might result in producing very unpleasant symptoms, may I ask you to correct in your next issue this unfortunate mistake?

In order to make the matter plain, allow me also to repeat the following sentence from the original article: "The adoption of an initial dose so small as to guard against the possibility of producing violent reactionary symptoms, and a graded increase of subsequent doses within such quantities as are known never to produce re-

action in healthy individuals would seem to afford the best protection against unpleasant results and misleading evidence."

Very truly yours,

E. L. TRUDEAU.

SARANAC LAKE, May 30, 1897.

OUR VIENNA LETTER.

[From our Special Correspondent.]

SERUM THERAPY OF DIPHTHERIA IN HUNGARY—A CASE OF COMPLETE TRANSPOSITION OF THE VISCERA, AND A CLINICAL DIAGNOSIS OF THE CONDITION—THE COINCIDENCE OF THREE CASES OF COMPLETE TRANSPOSITION—CONTINENTAL AND AMERICAN NURSING AND NURSES—THE SIGNIFICANCE OF A PHYSICIAN'S PHOTOGRAPH.

VIENNA, May 15, 1897.

THE recently published official statistics of serum-therapy of diphtheria in Hungary seem of special interest, coming as they do from a country where the influence of a preconceived judgment, for national or other reasons, was not at work to make the result conform to expectations. Toward the end of 1895 the government decided that all cases of diphtheria treated under its supervision, whether in hospitals or in district practice, should have the advantage of serum-therapy. Some 10,000 cases were treated in this way before February of this year, with a total mortality of 19 per cent. The mortality in Hungary from this disease during the year 1893 was 43 per cent., and during 1894, 43.7 per cent., the statistics being compiled from over 40,000 reported cases. The recent statistics are collected from about ten different districts. A comparison of the results obtained in each of the districts shows that there were no striking differences in the death-rate, but a corresponding improvement as to mortality all over the country. The mortality percentage varies only about 6 per cent. in districts widely separated, and whose inhabitants are living under extremely different circumstances. The highest mortality recorded, 27 per cent., comes, as might be expected and as has been the case everywhere, from the hospitals. It is in the hospitals that the patients are treated who, as a rule, before the attack have lived under the poorest and most unfavorable circumstances, in which the diagnosis has been longest delayed, and in which the treatment could only be applied when secondary infection had already taken place. It is to the statistics of such cases that the opponents of serum-therapy refer in order to justify their opposition. Even with all these disadvantages the serum treatment has effected a notable decrease in the death-rate of hospital cases.

Most of medical Vienna has been amused during the past week at the clinical diagnosis of a case in which the autopsy revealed complete transposition of the viscera. Death was the result of gangrene of the lung. The diagnosis had been made with a great deal of care, and the case had even been the subject of a demonstration at one of the special post-graduate clinics. The heart was very weak, and considerably diseased, and the apex beat was undiscoverable. The presence of huge gangrenous cavities, and of deeply infiltrated surrounding lung tissue, ob-

scured the real condition of affairs in the thorax. The somewhat enlarged spleen was taken for a cirrhotic liver, there being a history of alcoholism, while the almost normal liver was made out to be a much enlarged spleen. The diagnosis in faultless Latin, *hepatitis cirrhotica tumor lienis chronicus*, doubtless sounded better at the bedside than it did when reread in the cold, unsympathetic atmosphere of the section room.

The tendency of even the rarer anomalies to turn up in groups, illustrative, I suppose, of the "innate perversity of inanimate thing," is exemplified by the occurrence of three specimens of complete visceral transposition in the autopsy-room within six weeks. In two of the cases it was noted that the right testicle hung lower than the left, so that the explanation of this peculiarity, for which so many theories have been formulated, would seem to be absolutely dependent on the general conformation and position of the abdominal organs. The appendices on the left would have puzzled an unsuspecting and suddenly summoned medical man in case of inflammation of that highly susceptible evolutionary remnant. As there do not seem to be many cases recorded in literature of removal of the appendix from the left, perhaps some of its susceptibility is in abeyance in its unusual situation. In one of the cases the clinical history seems to show that the subject was right handed. The theory that right handedness generally is due to the greater weight of organs on the right side would seem to require left handedness in these cases. The exceptional "left hander" would certainly help to prove the rule, in the true sense of that much-abused aphorism, if he would but fortuitously and persistently turn up in these instances.

The discussion occasioned some months ago by the appearance in a prominent English magazine of a not very favorable criticism of English nurses, would lead the American abroad to compare Continental nursing and nurses with the English and our own. After all the modern American trained nurse occupies about the same position as her English professional sister. If anything, American nurses come from a better class, have a better preliminary education, and are even more especially trained, and consequently are more trusted and more thought of. Continental nurses, if one may speak in general after having seen French, Italian, and Austrian nurses, are, as a class, not at all what American medical experience of the last few years has made us acquainted with. The work does not seem to be taken up as a profession by those engaged in it as it is with us, and there is a consequent lack of interest in acquiring its necessary details. It is taken up casually because nothing better presents itself at the moment, to be dropped at the first opportunity. Very little serious organized effort seems to be expended in training them in their duties, and they occupy about the position of better-class hospital servants. The contrast is very marked in the position occupied here by the nurse and that which we are accustomed to, and I do not think that it is calculated to make American physicians like their own system less or the European more. The highly specialized training given nurses in the English and American system, and the position of trust that

the nurse has come to occupy in consequence, may have given rise to some of the evils that the fair English critic of the nursing system pointed out. The consciousness of professional knowledge may have led some of its possessors into thinking themselves of more importance than they really are. Some may even have taken advantage of the position to entrap a callow doctor, or a susceptible unwary bachelor patient, into putting on the matrimonial halter. But these are not faults that are confined to nurses, and not necessarily connected with the training they receive. Meantime as the result of their training the physician and surgeon finds in them skilled and trustworthy assistants to whose prudence and carefulness he can entrust details of treatment or of preparation for an operation which relieve him of a weight of care. It is only a matter for rejoicing that in consequence of this position of trust the nurse has learned her own worth, and the dignity of her position, and has gained correspondingly in self respect. The hospital servant of the old days, as one sees them here, shows how distinct has been the change for the better from the invasion of professionalism, and one is glad not to have to go back. Perhaps, as in all things medical, the pendulum has swung a little too far in the training of nurses, but the trained nurse may be trusted, like advances generally in medicine, to find her proper place.

Occasionally one finds in the Austrian medical journals advertisements of positions which are open to young doctors and for which one of the requirements demanded in making out applications is somewhat unexpected. Besides asking for his degrees and evidence as to preliminary education and post-graduate experience, the notices require him to send his photograph. The personal appearance of a doctor has always been said to be of a good deal of importance as regards his success professionally in private practice, but this very *naïve* admission that it will influence the decision as to his adaptability for a hospital position is almost amusing in these days of supposedly scientific medicine. Whether some have not been found who have sent a veritable "counterfeit presentment" of themselves in the shape of a photograph of some handsomer man, as is said to be done under corresponding circumstances in matrimonial negotiations, has not yet come to light, but may be confidently expected. Meantime the day of the personally attractive physician does not seem to be over, and the fortunately gifted ones may rejoice in consequence.

A Point in Electrolytic Epilation.—DUBREUILH (*Bull. Gen. de Thérap.*, February 28, 1897), in order to overcome the difficulty experienced in passing the electric needle to the root of the atrophied hairs, cuts all the hairs short in the region upon which he is about to work, and one or two weeks later he passes the needle into the follicle of those which have grown, and are therefore surely alive. The others are drawn out with forceps, and some weeks later, when the new hairs have grown in their places, they are treated with electrolysis. Being then young, they are more susceptible to the action of the electric current.

SOCIETY PROCEEDINGS.

AMERICAN MEDICAL ASSOCIATION.

The Semicentennial Meeting, Held at Philadelphia, June 1, 2, 3, and 4, 1897.

[Specially reported for THE MEDICAL NEWS.]

GENERAL SESSION.

FIRST DAY—JUNE 1ST.

AFTER the meeting had been called to order by the President, NICHOLAS SENN, M.D., of Illinois, the proceedings of the Association were opened by an eloquent prayer by the Rev. Leverett Bradley, the rector of St. Luke's Protestant Episcopal church, of Philadelphia.

Mayor Warwick was next introduced, and delivered a brief address. "I do not know," he said, in part, "that I have ever extended welcome on behalf of the city of Philadelphia to so many doctors. Philadelphia is the home of medicine; here Gross, Pancoast, Agnew, and Leidy made reputations which became national and worldwide. . . . A doctor is the last man on earth we send for, or want to send for, and although I have heard certain men in health deny both God and the doctor, I know that it is just these men who call most hurriedly for both when they fall ill. Personally, I have the highest regard and respect for the doctor, and I am really glad to see you here; and if I had a full opportunity to express all I think and feel you would see that it would be impossible for anyone to find a heartier and more sincere welcome than this that I give you now."

In the absence of Governor Hastings of Pennsylvania, who was detained in Harrisburg, the address of welcome on the part of the State was given by Charles Emory Smith, Ex-minister to Russia, who, in an address, which was both eloquent and facetious in parts, welcomed the Association to the State of Pennsylvania.

He said that, inasmuch as the Governor was compelled to hold an important surgical clinic to-day in Harrisburg, he had been drafted at the last moment as a substitute, an unprepared but entirely willing one. The nature of the Governor's work was the amputation of a gangrenous legislature, and he was sure that every member of the American Medical Association wished him every success in this dangerous procedure. Mr. Smith's remarks touched on the historical side of the medical profession in Philadelphia, and concluded with a hearty welcome on the part of the commonwealth of Pennsylvania to the members of the Association, wishing every success to their deliberations and the most beneficial results to mankind as their outcome.

DR. H. A. HARE, Chairman of the Committee on Arrangements, made several announcements relating chiefly to the social features of the meeting, and formally announced the program of entertainments for the day, and submitted the report of the committee, which was unanimously accepted.

Following this report the address by the President of the Association, DR. NICHOLAS SENN, was delivered. (See page 725.)

DR. HARE presented President Senn with a gold in-

signia of his office, and in a felicitous speech conveyed to him the appreciation of the Association of his work. Dr. Hare then moved that an invitation be extended to many foreign visitors now in Philadelphia to attend the meetings of the Association, which motion was unanimously carried.

The report of the Committee on the Rush Monument by A. L. GIHON, M.D., Medical Director United States Navy, was listened to with a great deal of attention. After a glowing tribute to the work, patriotism, and heroism of Benjamin Rush, Dr. GIHON went on to contrast the work accomplished by the Homeopaths in erecting a magnificent statue to Hahnemann, with the unfruitful efforts of the Regular School of Medicine to commemorate the name of "America's greatest physician" with a fitting memorial, and emphatically pointed out that, while a small body of the deluded followers of Hahnemann had in four years subscribed \$75,000 for their purpose, the mass of the regular profession in America had in twelve years succeeded in raising only a trifle over \$4000.

The committee had finally exhausted its own resources, and it now appeals to the Association to determine at once and definitely what further steps are to be taken in the matter—whether the erection of a modest bust of bronze, such as is warranted by the amount of money in the committee's hands, or an appropriate memorial, such as the name of Rush and his claim to national recognition demand. After the thanks of the Association were tendered to Dr. Gihon for the report, Dr. Cutter of New York moved that \$1000 be appropriated annually by the Association until the requisite sum for the completion of the monument was obtained. Dr. Cutter's motion was withdrawn, however, after an amendment offered by Dr. Graham of Colorado that the Association immediately raise \$100,000 for the purpose, and pledging Colorado to raise the first \$2000 for the fund. Dr. Graham's amendment stirred up the greatest enthusiasm, and resulted in subscriptions on the spot of \$2000 each from the States of Ohio, Missouri, Illinois, Pennsylvania, and New York; and in personal subscriptions of \$100 each from Drs. Russ, Cutter, Hall, Ferguson, Wiggin, Jelks, Holt, and Herrick, besides the promises of nearly every president of the State societies to co-operate in the movement, according to their ability to contribute to the fund. A motion was also made and carried that the *Journal of the American Medical Association* keep a standing appeal in its columns for subscriptions to the Rush Monument Fund.

The report of the treasurer, Dr. H. P. Newman, showed that there was a balance on hand, January 1, 1897, of \$9075.94; receipts for the year ending December 31, 1896, \$44,141.14; expenses for the same period, \$41,811.14.

A resolution was offered by the Executive Committee, and carried, that there be made an Executive Council of five, consisting of three officers of the Executive Committee and two officers to be chosen by election. Of this council of five, one must belong to the Section on Practice of Medicine and one to the Section on Surgery and Anatomy. The duties of the Council will consist in the

transaction of the duties commonly delegated to the Executive Committee during the intervals between the meetings.

SECTION ON PRACTICE OF MEDICINE.

FIRST DAY—JUNE 1ST.

ON calling the section to order the Chairman, DR. J. H. MUSSEY of Philadelphia, spoke of the inspiration that all must feel in meeting in this early home of American medicine. He felt that the time of the section would be best improved by taking up the scientific work instead of indulging in compliment and greeting.

DR. W. B. CAMAC of Baltimore, read a paper, entitled

THE SCHOTT TREATMENT OF CARDIAC DISEASE.

No satisfactory theory has ever been advanced to explain fully how this treatment meets the indications and produces the results which are claimed for it. Schott himself explained it on the theory of the reflex action of the nerve-centers. Lauder Brunton and Ludwig have discovered that the muscular system has a capacity of storing blood equivalent to that of the internal organs and the skin, and explained the actions of the Schott treatment on the theory that the resistant treatment and the baths combined stimulate the muscular system to such a degree as to relieve resistance in the peripheral circulation, but, whatever the theory of its action, the results obtained by the treatment at Neuheim are undoubted in reducing the size of enlarged and dilated hearts. This method of treatment has been introduced into the Johns Hopkins Hospital for the purpose of testing its efficacy not only in cases of heart disease but in affections of the kidneys. The report embraced the results of ten cases; of these four patients had died, two were not improved, one showed improvement only while under constant treatment, and in three the permanent results were most satisfactory. Some of these were cases of chronic nephritis in various stages of advancement, but all of the patients had enlarged or dilated hearts. In connection with the Schott treatment, however, various heart stimulants, such as nitroglycerin, digitalis, strophanthus, and strychnin were used as indications demanded. The conclusions of the experiments were that, while extensive changes in the position of the cardiac beat were obtained in all, that effect alone does not imply permanent improvement. In Bright's disease it cannot be depended upon for any satisfactory results.

DR. OSLER of Baltimore, in discussing the paper, said that in suitable cases the Schott treatment is undoubtedly of positive advantage. The objection to it is that it is difficult to carry out, the class of cases in which it is indicated are those of moderate dilatation of the heart without much degeneration of its muscular substance. This condition is usually found in heavy drinkers, between the ages of forty and forty-five.

DR. STOCKTON of Buffalo believes that the Schott treatment is dangerous when applied indiscriminately to cases of heart disease, and insisted that it should be carried out with great caution. In the baths at Neuheim, the water is charged naturally with gas. In imitation of

this he had in some cases used ordinary cylinders of carbonic gas, allowing it to escape through a tube into the bottom of the bath. Dr. Woods Hutchinson had suggested to him an explanation of the beneficial effect of the gas by saying that it afforded a certain propulsive force to the blood-vessels and so relieved the heart by assisting the circulation.

DR. J. H. HERRICK of Cleveland said that as far as he had been able to investigate the subject, the treatment had no definite reference to the etiology of the disease. In all treatment some relationship to the etiology of the difficulty as well as the organic disease was demanded. For himself, he found more satisfactory results in proper attention to the eliminative and excretory functions and in proper nutrition.

DR. MORRIS of New York, in opposition to what Dr. Herrick had just said, insisted that the subject as presented in the paper was pertinent and practical. He had found enlargement and dilatation of the heart common, especially among beer-drinkers. He commended the Schott system of exercise in gastralgia. In his hands it had produced marked effect in diminishing the area of dulness of the heart in such cases.

DR. CAMAC, in closing the discussion, said that the effect on the kidneys is greater when the salt bath is given than when plain water is used, either hot or cold. In his paper he had given almost exclusive attention to the baths, but in connection with them, the prescribed gymnastic drills, such as were used at Neuheim, had been employed. For this purpose some of the nurses at the Johns Hopkins Hospital had been trained to apply the resistance exercise treatment. The food and diet had also been carefully regulated. In none of the cases had mountain climbing been tried, although this was a part of the systematic Schott method.

DR. D. L. ROCHESTER of Buffalo presented a paper upon

THE PROGNOSIS AND THERAPEUTIC INDICATIONS IN HEART DISEASE.

He classified all heart diseases into (1) disease of the cardiac valves; (2) disease of the blood-vessels; and (3) disease of the heart muscle. It had been his experience to have patients brought to him in conditions regarded as utterly hopeless, and, by proper treatment, he had been able not only to relieve them temporarily but to give them years of comfortable existence. Even in the most serious conditions of heart disease, it is never prudent to give an unfavorable prognosis until trial has been made by proper treatment to improve the tone and strength of the heart muscle and the arterial walls. His treatment consists in absolute rest in bed, the free use of cathartics, diuretics, diaphoretics, baths, passive exercise, and a liquid diet. Proper nutrition and exercise are important factors in the later management of the cases.

DR. J. B. HERRICK of Chicago strongly advocated the revival of venesection as a therapeutic measure of inestimable value. It is of especial service in cases of general edema and cyanosis. He narrated three cases of myocarditis in which he had applied this treatment with saving effect. In each instance he had drawn from sixteen

to eighteen ounces of blood; in all of them the improvement was prompt, and in two of them it had been permanent.

DR. MARVIN of Louisville, Ky., strongly advocated the use of strychnin hypodermically in cases of acute dilatation of the heart. His method is to begin with one-twentieth of a grain of the drug and to increase it steadily until he obtains the physiologic effects. Rest in bed and carefully regulated nutrition are also potent factors in reaching permanent results.

DR. J. M. UPSHUR of Richmond, Va., endorsed what the previous speaker had said with regard to strychnin, and advocated the use of nitroglycerin alternately with the strychnin.

DR. WAINWRIGHT advocated venesection in extreme conditions due to heart disease. He reported the case of a woman suddenly presented to him in extreme cyanosis from senile heart disease, from whom he removed eighteen ounces of blood, with prompt and lasting benefit.

DR. ROCHESTER, in closing the discussion, said he used tincture of nux vomica as a heart tonic. He gave it in large doses, gradually increasing up to 1 dram three times a day.

DR. C. F. HOOVER of Cleveland read, by invitation, a paper, entitled

REDUPLICATION OF HEART SOUNDS.

Various theories have been advanced to account for the phenomenon of double sounds of the heart. He discussed these very elaborately and reached the conclusion that negative tension in the thorax, not compensated for by increased strength of the heart beat, occasioned an asynchronous action of the two sides of the heart. This necessarily produced the double sound.

DR. HENRY BEATTES of Philadelphia read a paper upon

THE USE OF DIGITALIN WITH REFERENCE TO THE DOSE.

Digitalis has long had the reputation of being a most uncertain drug. It has been discovered that the contradictory physiologic effects are due to the existence of elements in the crude drug having diametrically opposite properties. The attention of the pharmacist has therefore been directed to separating and refining the different alkaloidal elements. There are now upon the market two preparations of digitalin, one known as the German, or Pure Merck, and the other as the French Merck, the former is readily soluble in water and alcohol, but not readily soluble in ether; the latter differs from this in not being readily soluble in water, and is also a more powerful drug and necessarily must be given in smaller doses. Digitalin, German, is the preparation he uses. One-tenth of a grain is the minimum dose for an adult, and one-half a grain the maximum dose. It does not produce irritation of the digestive tract even when used for long periods of time, nor does it have any cumulative effect. It is indicated in all lesions of the heart except stenosis with dilatation. Cases presenting senile conditions were described in which remarkably favorable results were obtained.

DR. J. H. HERRICK, during the discussion of the paper, said that digitalis or digitalin acts upon the heart through the pneumogastric nerve. The one precaution which he wished to emphasize was that neither digitalis nor digitalin, either "French" or "German," should be given in inflammatory conditions of the heart. He was opposed to the routine treatment of heart lesions, no matter what their nature, by any drug, and more especially by digitalis.

DR. HARRY TOULMIN of Philadelphia read a paper, entitled

TRACHEAL TUGGING.

He classified his cases into (1) very slight up-and-down movement, (2) slight up-and-down movement, (3) tugging, (4) extra tugging. Seventy-five patients were examined. Of these, 44 presented no symptoms which could be ascribed to this class, 19 belonged to class 1, 5 to class 2, 2 to class 3, and 5 to class 4. The phenomena of the moving of the trachea with the respirations or the pulsations of the heart were due, as a rule, to aneurism of the ascending aorta.

DR. HELEN BALDWIN of New York read a paper upon THROMBOSIS OF THE BLOOD-VESSELS OF THE NECK.

She reported the case of a colored girl, aged twenty, who presented the symptoms of pain in the left side of the neck and in the axilla. There was extreme dilatation of the heart and panting respiration. Temperature taken in the mouth varied between 94° and 96.5° F., while in the rectum it was constant at 102°. The external jugular was plainly defined and had the feeling of a hard cord. The patient developed signs of pneumonia, and died on the tenth day. Autopsy revealed an enlarged heart, with organized thrombi in both the external and internal jugular veins. Many similar cases were cited from literature upon the subject, most of which terminated fatally in a short time.

SECTION ON SURGERY AND ANATOMY.

FIRST DAY—JUNE 1ST.

THE section was called to order by the Chairman, DR. REGINALD H. SAYRE of New York, who made a brief address contrasting the surgeons of the past with those of the present and alluding to the steady development of the science.

DR. B. MERRILL RICKETTS of Cincinnati read a paper, with the title

LIGATION OF THE COMMON CAROTID FOR TRIFACIAL NEURALGIA, WITH EXPERIMENTS AND OBSERVATIONS ON DOGS.

The paper was illustrated by specimens and charts of the arterial and nervous systems. The pain in neuralgia, the speaker said, is due to anemia or congestion. In early life congestion is the common cause, while in advanced years anemia is the usual factor. The effect of ligation of the common carotid artery is to diminish the blood pressure. In experiments on dogs he had found that no histologic change occurs in the nervous structure after the ligation. He reported the case of a man ninety-six years of age, who suffered from trifacial neuralgia and

who was very much benefited by the ligation of the carotid artery. The profuse hemorrhage accompanying the operations of Rose, Hartley, and Kraske were contrasted with the bloodless operation of ligation of the carotid.

DR. J. MCFADDEN GASTON of Atlanta read a paper, entitled

THE NERVE ELEMENT IN SURGICAL PATHOLOGY.

He said it was a fair inference that relief from pain may also indicate a curative influence. Success in surgical operations depends not a little upon the frame of mind of the patient and the nature of the surroundings. The speaker believed shock to be due to the continuous baleful influence induced by the injured tissues, which influence may be arrested by removing the part. The importance of recognizing the neuropathic diathesis cannot be overestimated. There are many evidences of the effects of nerve reflexes which could be alluded to. The writer presented the following conclusions:

1. The cutaneous development of the minute branches of the cerebrospinal system of nerves and the ganglionic ramifications of the great sympathetic are so related to the capillaries as to establish a reciprocal action between them and the great nerve-centers.

2. The vasomotor nerves are so intimately linked to the excitomotor, the excitosecretory, and excitodynamic system of nerves that the impressions made through the superficial afferent nerves are conveyed to all the corporeal structures and tissues so as to produce their effects on the different organs.

3. Reflex phenomena depend upon a complex interchange of local pathologic conditions with the nervous ramifications to remote parts of the body.

4. The fountain head of energy for all functions lies in the nerve-centers, and by controlling emanations from this source of power, the vital forces will be propagated with regularity and uniformity to all the remote parts of the physical organism. On the contrary, a hurtful influence disseminated from the nerve-centers causes disease of different organs.

5. The means to be adopted for avoiding injurious impressions upon the nerve-centers and the measures to be used for the correction of their derangements, make up the whole prophylactic agency of hygiene, and include all the therapeutic appliances in the treatment of the disease as well as the application of surgical measures.

6. Close observation of the various modifications of the nerve element in the physical organism should reveal its direct influence in surgical pathology and lead the surgeon to the adoption of proper means of relief.

DR. J. EWING MEARS presented a paper upon

OPERATIVE PROCEDURE FOR THE RELIEF OF OCCLUSION OF THE JAWS.

Closure of the jaws may be due to sloughing, ulcerating, cicatricial contraction, or to spasm. The spasmodic variety may be brought about by irritation of the fifth nerve, delayed or difficult eruption of the three lower molar teeth, etc. In the case of closure of the jaw from difficult eruption, the mouth should be forced open and the second molar extracted, or the third may be removed if displaced

or otherwise abnormal. In all cases of spasmodic closure the cause should be removed.

The chronic or permanent form of closure of the jaws results also from rheumatic and other diseases of the articulation with the deposit of bone in the joint. Perhaps the most frequent cause of this class of cases is fracture of the condyle which has been recognized. The cause of occlusion of the jaws may be unilateral or bilateral. In each case a careful examination should be made in order to determine the best method of procedure.

The following conclusions were drawn:

1. Jaw closure due to the presence of cicatricial tissue in the buccal spaces can be most efficiently relieved by the formation of a canal lined by normal membrane by means of a ligature passed behind the cicatricial mass, reunion of the divided tissues and reformation of the nodular tissue not occurring after division when this canal has been formed.

2. Ankylosis of the temporomaxillary articulation producing jaw closure can be best relieved by removal of both coronoid and condyloid processes with the upper portion of the ramus, thus affording ample space for the formation of a freely movable false joint. The operation should be performed through the mouth, thus avoiding disfiguring cicatrices.

DR. ERNEST LAPLACE of Philadelphia read a paper upon

IMPROVEMENT OF BRAIN FUNCTION BY SURGICAL INTERFERENCE.

The two great symptoms of brain troubles which call for interference are pain and disturbed function. In operating, the two dangers to be guarded against are shock and sepsis; the former is to be avoided by careful hemostasis, by the use of strychnin and external heat, and keeping the head low, the latter by the strictest antiseptic precautions. In congestion and other conditions in which general swelling was supposed to be present, the author has performed transverse linear craniectomy. After removing a portion of bone he incises the dura throughout the whole length, avoiding the superior longitudinal sinus. The wound is packed with sterile gauze, the ends of which come out at either extremity, the scalp then being united. On the eighth day the sutures and gauze are removed. He also referred to trephining for epilepsy, and linear craniectomy for microcephalus, in both of which conditions he had obtained favorable results.

DR. M. H. CRYER of Philadelphia demonstrated on the cadaver a new surgical engine, which is a modification of the well-known dental engine, more powerfully made and constructed to run at a greater speed. The advantages claimed for this engine are the ease and accuracy with which any portion of bone can be removed and the compact and aseptic construction of the apparatus.

The last two papers were discussed together. DR. WYMAN of Detroit coincided with the views expressed by Dr. Laplace. DR. J. WILLIAM WHITE thought the possibilities of evil which would follow the general adoption of the radical measures advised by Dr. Laplace should not be overlooked. Taking into consideration all brain operations by surgeons the country over, the mor-

talidity would be considerably more than that expressed in the paper referred to. It is necessary to distinguish between infected brain lesions which require drainage and other conditions in which this could not possibly result in any benefit, such as cases of arrested development, insanity, and others of this class. A diffuse brain lesion cannot be drained through one opening, or even through a series of openings. A very large number of cases must be observed before it is safe to say that improvement is to be expected after these procedures. The immediate result of the operation itself should be taken into account. In a paper published a few years since on "The Effect of Operations, *per se*," he had showed that improvement in a large number of conditions had followed simple explorations or other measures that could not possibly have affected the condition. We cannot, however, from these cases base conclusions which would warrant us in advising these operations upon other patients. In cases of localizing symptoms, either of abscess, tumor, or depressed fracture, the indication for operation is distinct and imperative, but without some clear-cut symptom of abnormal intracranial condition, which could probably be remedied by trephining, he would hesitate to advise operation.

DR. FRANK STAHL of Chicago read a paper, entitled

ONE OF THE RARER FORMS OF HERNIA.

He included two forms—one partial intestinal-wall hernia, and diverticula hernia. The former is generally acceded to occur in a chronic condition, but many eminent authorities deny the existence of the acute condition of partial hernia. He described the mechanism of the occurrence of this condition, and referred to cases in which it had been present beyond doubt.

SECTION ON OBSTETRICS AND GYNECOLOGY.

FIRST DAY—JUNE 1ST.

The Section was called to order by the Chairman, DR. MILO B. WARD of Topeka, Kan.

In the absence of the Secretary, DR. H. M. FISHER of Philadelphia was elected to fill the position.

DR. WARD, in his address, presented a review of some of the work accomplished in gynecology during the last half century, dwelling particularly upon the labors of honored members of the American Medical Association. Sims and Emmet, he said, were the pioneers of gynecology in America, and they were ably seconded by such eminent followers as Peaslee, Thomas, Goodell, Fordyce Barker, Parvin, and a score of others. Numerous innovations and valuable suggestions in the treatment of the various gynecologic conditions came from them. He called attention to the fact that to this great medical organization must be accorded credit for the movement that resulted in the separation of gynecology from obstetrics, and the establishment of special chairs of gynecology in the various medical colleges of the land. The question of the advisability of the removal of the uterus in suppurative disease of the adnexa has agitated the minds of gynecologists during the past year, and the tendency toward this radical procedure has largely developed, although there are many and able men opposed thereto.

No universal rule has been as yet found for the operative treatment of uterine fibroids. The prevention of vaginal prolapse after total extirpation of the uterus is a puzzling question. The method of anchoring the vaginal walls to the broad ligament pedicles is probably the best that has as yet been suggested. Carcinoma of the cervix is an indication now for the entire removal of the uterus in preference to amputation by the knife or by the galvanocautery, although some operators still adhere to these methods, especially in the so-called inoperable cases. Hysteropexy and Alexander's operation have been thoroughly discussed during the past year, and many interesting reports and arguments for and against these procedures have been presented.

A CONSIDERATION OF SOME OF THE CONDITIONS INFLUENCING THE RESULTS OF THE SURGICAL TREATMENT OF UTERINE RETROPOSITION

was the title of a paper presented by DR. AUGUSTUS P. CLARKE of Cambridge, Mass. He stated that retroversion of the uterus is generally preceded by a certain amount of prolapse, due to a yielding of the supports from below. Usually the axis of the cervix is nearly at right angles to the axis of the vagina. Any deviation from this position is not to be considered as pathologic until the axes of the two organs nearly correspond. In some instances fatty degeneration of the round ligaments causes them to become unable to support the uterus, and adhesions also help to drag this organ out of place. In order to restore the uterus, these adhesions must be separated and the round ligaments shortened. The genupectoral position, with gentle manipulation, will best restore the uterus to its normal position when it is found to be resting between the uterosacral ligaments. The danger of hernia following the operation of shortening the round ligaments has been advanced as an objection to the performance of this operation, but proper precautions will suffice to prevent this complication. Ventrofixation or ventrosuspension has become a favorite operation for the cure of the lesion. This operation in certain cases sets up a most distressing pathologic condition, and should not be performed in women who have not yet reached the menopause. The chief cause of the failure in operations for retrodisplacement is the persistence of adhesions. In such cases hysterectomy is the best method for insuring permanent relief.

In the discussion which followed, DR. WERNER of Philadelphia said that she wished to place on record the cases of two patients who had suffered from the condition described in the paper. By the use of rest, packing, and a year's persistent treatment, cure resulted, and in one instance the patient passed successfully through two subsequent pregnancies. There was, however, still some tendency to prolapse. The second case was similar. She wished especially to ask the author of the paper what result was to be expected in subsequent pregnancies after the various operative procedures, and whether stretching would recur?

DR. M. PRICE of Philadelphia said that in thirty-years' practice he had not seen one case of retrodisplacement that could not be cured. Purely medical means will

answer in the case of patients that have not been torn in labor. He objects to shortening the round ligaments, and believes that Nature never meant these ligaments to support a hair's weight. The diseased condition consists essentially of an atrophy of the uterine wall, and it should be treated by some mechanical support in the uterus itself or by some support from below. Ventrofixation or other operations of the kind are mischievous. The pedicles, after the serra-neude method of hysterectomy, will ultimately stretch, and if this is true, to how great an extent will the uterus be held up by the tiny round ligaments?

DR. SELL of New York believes in medical gynecology. Massage, internal and external, will break up the adhesions and restore the normal condition. Gymnastics should also be tried, the patient lying flat upon the floor and moving her limbs in such a manner as to produce constant tension of the uterus upward. This maneuver should be repeated two or three times weekly, the interval gradually being increased.

DR. JOSEPH EASTMAN of Indianapolis remarked that before considering therapeutics we should always consider condition. Uterine displacement and chronic constipation are the two great causes of the diseases of women. Exhaustion of the life of the pelvic plexus of nerves, the result of over-sexual indulgence, is the cause of many cases of chronic constipation. The uterus, to a certain extent, is an erectile organ, and in these cases it needs physiologic rest, and if any mechanical support is required, he would suggest a "barbed-wire" pessary.

DR. ROSENTHAL of Indiana stated that no condition gives the gynecologist such trouble as retrodisplacement of the uterus. It is a condition found in the young girl as well as in the married woman. It is especially apt to occur in women in whom the bladder is attached to the uterus low down, so that the cervix is drawn forward, that is, where there exists a shortening of the anterior vaginal wall. He believes that the pessary is useful in its place, especially in cases originating *post-partum* or *post-abortum*.

DR. JOSEPH PRICE of Philadelphia stated that, in all his practice, he had not seen a woman who could not nurse her baby, and yet it is becoming common, he understands, for women to refuse to do so, and for this reason subinvolution is becoming more frequent. The older gynecologists met with success merely from the use of pessaries in these displacements. The doctor of to-day prefers to put his patient to bed for three or four weeks, and do a ventrofixation, while refusing to give three or four-weeks' time in bed with the use of the pessary. He is opposed to both Alexander's operation and ventrofixation. He has undone many ventrofixations. The pessary is all that is needed if the floor of the pelvis is restored.

DR. GOLDSPOON of Chicago regretted the difference of opinion advanced by the various speakers. He believes that the round ligaments hold the fundus uteri forward, and that the uterosacral ligaments draw the cervical zone backward, producing normally an anteversion of the organ. If either of these ligaments stretches, the organ falls back. If this retroversion is due to a stretching of the uterosacral ligaments, Alexander's operation will not

cure the condition, while if the round ligaments are at fault, this operation is the best procedure with which we are acquainted.

DR. H. M. FISHER of Philadelphia said that the uterus has no fixed normal position. It can readily be retro- or lateroverted, and varies in position with the degree of fullness of the bladder and rectum. It is, in other words, in a state of mobile equilibrium. Upon the cause of the retrodisplacement will depend the method of treatment. We may have a puerile retrodisplacement due to chronic constipation. The most frequent cause, however, is to be found in the puerperium as the result of a tight bandage, dorsal decubitus, and chronic constipation. Involution is thus prevented, and a permanent retrodisplacement follows. It is not every retrodisplacement of the uterus that gives rise to symptoms.

DR. HALL of Missouri thought that the results of Alexander's operation are worse than the disease. Too many herniæ have followed the operation, especially in fat women. He believes that the future operation is not Alexander's procedure, but fixation of the uterus through the vagina, according to Vineburg's method.

DR. HUMISTON of Cleveland saw Alexander's operation performed by Alexander himself ten years ago, and was favorably impressed. But he has seen so many failures following it that now he finds no indications for its performance. If the adnexa are diseased, the only thing to do is to remove them by abdominal section, and then replace the uterus; if they are not diseased, we can succeed by the conservative method of treatment.

DR. MASSEY of Philadelphia believes that the inflammatory condition always precedes the displacement, and not the displacement the inflammation.

DR. LAWRENCE of Columbus said that the symptoms from which the patients suffer are not directly dependent upon the displacement, but upon the metritis, endometritis, peritonitis, adhesions, and diseased adnexa that accompany it. Shortening the round ligament in this condition is not devoid of danger. The antelexion resulting from ventrofixation is just as serious a matter as the retrodisplacement, and the patients cannot be very much benefited thereby. Shortening the round ligament by an abdominal section will accomplish the work without any serious condition following.

DR. JOSEPH PRICE read a paper on
MECHANISM AND TREATMENT OF PERINEAL LACERATIONS. (See page 734.)

DR. STONE of Washington considers Emmet's operation the most difficult of all operations in surgery. Tait's operation, he thinks, is of service only in restoring torn tissues, and not the floor above. Emmet never ties his sutures until all are applied, including the crown suture. The latter is applied from the myrtiform caruncle upward and inward, including the crest of the rectocele, and out at the corresponding point in the other side, thus, when tied, shortening the vagina.

DR. M. PRICE said that, in denuding the muscle in complete tears, it is necessary to bury a tenaculum deeply into the dimple so as to catch the muscle to be repaired. The first set of sutures in the vagina is closed. The

second set of sutures is passed from the perineum toward the vagina, the last two sutures of this set being known as the sphincter sutures. The retracted edges of the muscle are drawn up and the needle plunged through. The union should be only moderately tight so as to avoid cutting. Failure will then not occur.

DR. EASTMAN said that, in restoring the floor, he dilates first the sphincter and then secures relaxation, so that the anus does not so nearly approximate the vulvar orifice, and thereby gets more space in which to form the floor. This dilation should be done by an assistant or nurse who does not aid in the subsequent operation.

SECTION ON DISEASES OF CHILDREN.

FIRST DAY—JUNE 1ST.

The address of the Chairman, DR. J. A. LARRABEE of Louisville, Ky., was in the nature of a history of the Section.

A letter was read from DR. A. JACOBI, the organizer of the Section, and its first President, who stated that it was not founded but was in the air—a "spontaneous generation." It was the sixth section formed in the history of the Association. Mention was made of the rapid strides in pediatrics, its establishment as a specialty, and its separation from the Chair of Obstetrics in our medical colleges. Scarcity of pediatric literature was until lately to be deplored, but this can be no longer urged. A suggestion was made that a censorship be created over medical literature because of the large number of papers now unnecessarily presented.

DR. O. W. BRAYMER of Camden, N. J., read a paper, entitled

THE ANTISEPTIC VERSUS THE ANTITOXIC TREATMENT OF DIPHTHERIA.

The author's opinion was that antitoxin does not deserve the reputation it has acquired. He advocated local antiseptic treatment, and quoted statistics of cases occurring in his practice in which chlorate of potash and iron had alone been used with most gratifying results.

THE TREATMENT OF DIPHTHERIA

was the title of a paper read by DR. JOHN H. COUGHLIN of New York. He said, in part, that a better understanding of the action of old remedies is more to be desired than constant experimentation with new ones. In the treatment of diphtheria it is very essential to keep up the nutrition. Nourishment should be given in small quantities, and often. Large quantities of alcohol should never be given to children, for, aside from the catarrhal condition of the gastro-intestinal tract that ensues from such ingestion, the eliminative organs become overworked.

THE SERUM-THERAPY OF DIPHTHERIA

by DR. EDWIN KLEBS of Chicago, was the title of a paper read by the author's son. The writer had arrived at the conclusion that both antitoxic and bactericidal properties were inherent in the serum, and that both worked to produce a cure; they are not products formed in immunized animals, but are transformed from injected culture fluid.

DR. EDWIN ROSENTHAL then read a paper on
THE SPECIFIC USE OF DIPHTHERIA ANTITOXIN IN
LARYNGEAL DIPHTHERIA,

and was followed by DR. W. W. GRAY, of Bridgeport, Conn., who presented one with the title,

THERAPEUTICS OF DIPHTHERIA WITH SPECIAL REFERENCE TO ANTITOXIN.

During the general discussion of these papers DR. FREDERICK A. PACKARD of Philadelphia said that the statistics that had been quoted in favor of the antitoxin treatment of diphtheria were most convincing. He doubted the value of the agent, however, as a prophylactic, as in a number of instances in which he had made use of it for this purpose it had proved ineffectual.

DR. W. P. NORTHRUP of New York said that every member of the staff of the Willard Parker Hospital for Contagious Diseases, New York, with one exception, heartily endorsed the use of antitoxin. As far as its prophylactic value is concerned, the record made at the New York Infant Asylum, when a serious epidemic was stopped by the injection of small immunizing doses, is convincing. During the pre-antitoxin days the speaker had had twenty-two successive deaths after intubation in private practice, and Dr. O'Dwyer had had twenty-five in spite of the best treatment then known.

SECTION ON MATERIA MEDICA, PHARMACY, AND
THERAPEUTICS.

FIRST DAY—JUNE 1ST.

Chairman, DR. WARREN B. HILL of Milwaukee.

The Section was called to order at three o'clock. The chairman made a brief address of welcome to the members of the delegation from the American Pharmaceutical Association, which was responded to by Dr. F. E. Stewart, chairman of the delegation. The secretary read a communication from the Philadelphia College of Pharmacy, extending an invitation for the Section to hold its sessions in the lecture-hall and museum of the college. On motion, it was resolved to visit the College of Pharmacy on June 4th, and to hold the Thursday afternoon session there.

The first paper, entitled

CELANDIN; ITS PHARMACOLOGY, PHYSIOLOGIC ACTION, AND THERAPY,

was read by DR. JOHN V. SHOEMAKER of Philadelphia.

The extravagant claims made about a year ago in favor of celandin (*Chelidonium majus*) led the reporter to investigate the subject clinically in the treatment of cancer of the skin and in cases of psoriasis and similar conditions, for which the drug had been recommended by a Russian physician. Dr. Shoemaker's results were disappointing. He could not obtain the effects which had been reported, and considered that the claims were not well-founded. He used a fluid extract made with equal parts of glycerin and water as a medium, as recommended in the Russian papers, internally and locally, topically and hypodermically. While the drug has no special action in cancer, it is a good tonic in moderate doses,

a stimulant in larger ones, and a purgative if large doses are given. By its physiologic action upon the bronchial mucous membrane, it is expectorant, and generally is a stimulant to the glands of the skin and mucous membranes. It is efficacious in the treatment of cases attended by infiltration of the skin, as in chronic local eczema and psoriasis, but has no power to influence or retard the progress of cancer.

DR. F. E. STEWART said that there had been many cancer specifics brought forward and they had all followed the same course. He recalled the history of the introduction of another drug some time ago, when the newspaper accounts of its wonderful effects in Europe had caused such a demand for it, that an amount of syrup and extract representing more than two tons of the remedy was sold in the United States before an ounce of it had been imported. This shows the unreliability of the preparations that are sold to the public. He asked if the reader of the paper had noticed any difference between the effects of the recent herb and the dried specimen.

DR. THORNTON said that the claims of the Russian physicians for celandin were also made by Dr. Spivak, now of Denver, who published a clinical report of successful cases. The report was valueless, however, because it was not accompanied by data of microscopic examinations of the tumors. He congratulated Dr. Shoemaker upon reporting his negative evidence, which is of great assistance, especially to the younger members of the profession.

DR. SHOEMAKER said that he had come to the conclusion that the great multitude of new drugs that are thrust upon the medical profession put us in a very awkward light before the public, especially those which are known by newly coined words and expressions. There is one consideration in favor of celandin and that is, that it is official. When, a number of years ago, he wrote his book on "Therapeutics" he tried to include all the new remedies, and had since found many of them to be worthless. In reply to Dr. Stewart, he stated that he had used both the fresh and the dried drug with all the precautions recommended by the Russian reporter and had found them equally worthless in the treatment of cancer.

DR. C. C. FITE of New York read a paper, entitled

A PLEA FOR UNIFORMITY IN DIASTASE TESTS.

DR. F. E. STEWART of Detroit said that as the paper brought up a question of much importance and was the result of an extended investigation, he moved that a committee be appointed, consisting of the Chairman of the Section and two other members, to suggest a practical test for diastase and to recommend the same to the Committee on Revision of the United States Pharmacopeia, and that the result of their deliberations be transmitted to the American Pharmaceutical Association for its concurrence. He said that he had himself given considerable attention to the subject, and as a result of about three thousand tests made under his direction by competent chemists, he had found a great variety of methods in use and corresponding differences in the results. Active diastase has great starch-transforming power; for instance,

a few grains are sufficient to convert all the starch taken in during an ordinary meal by an adult man in the period of less than a minute of time. Many of the preparations said to contain diastase have no starch-digesting power whatever. Everything depends, therefore, on the quality of the diastase, and some regulation is urgently needed so as to enable the physician to differentiate between the true diastase preparations and those which are falsely alleged to contain diastase.

DR. F. R. STODDARD of Shelburne, Vt., said that he had been impressed with the importance of the positive determination of the digestive power of diastase, and preparations which claim to have diastatic power, and of the necessity of the establishment of some uniform test by authority of the Pharmacopeia. This is a question which should interest every physician who prescribes these remedies. The manufacturer under present conditions sends out these preparations, and the physician uses them expecting them to fulfil the claims of the manufacturer, and that they will do a certain amount of work in the digestion of starchy foods, but at present he has no means of knowing whether these claims are true or false.

The Chairman said that the question was of great importance, because the American people are very prone to suffer from what may be called amylolitic indigestion, owing to a number of contributing causes. In the first place there is too much starch in our food, and in the second, owing to hasty deglutition, there is a deficiency of ptyalin. There is therefore a great demand for diastase and preparations which claim to assist in the digestion of starchy foods, and there is no doubt that some form of diastase will be introduced into the next Pharmacopeia. A proper test should therefore be established and a standard be made before its introduction.

DR. F. WOODBURY of Philadelphia said that the chemistry of the digestive processes is now so well understood by physicians that the form of dyspepsia characterized by deficient amylolitic power in the secretions is generally recognized. As a result, physicians no longer prescribe pepsin for all conditions of imperfect digestion, but they differentiate the cases in which a starch-transforming ferment will afford the desired relief from those in which the proteid digestion is at fault. Therefore, measures to promote the secretion of saliva and of the pancreatic and intestinal juices, are recommended, and there is a constantly increasing demand for starch-transforming ferments by the profession. It is most important, therefore, that some uniform test should be formulated by the biologic chemists, which may enable us to distinguish between the physiologically active and the inert or fraudulent diastatic preparations offered to us by the manufacturers.

Dr. Fite, in reply to a question, said that he had stated that the acidity of the gastric juice will retard the action of diastase in the stomach. In cases of hyperacidity it is necessary to administer an alkali before the meal, and then by the use of diastase taken with the food the difficulty can be overcome and the symptoms relieved. The reason why so many physicians have failed to relieve patients suffering from starchy indigestion is because the

existence of this condition of hyperacidity, and neglect to administer the alkali before meals. Bicarbonate of soda in 10 to 20-grain doses immediately before each meal will be of great assistance to the action of the diastase taken during the meal. Six years ago, when he first took up the study of this subject, diastase was practically unknown to a majority of practitioners, whereas now it is used to a great extent by physicians all over the world. The loss of saliva by tobacco-chewers, the defective mastication of food, and the limited secretion in young children, with the great proportion of starch in our food as pointed out, all contribute to make diastase and its preparations prominent in therapeutics, and there should be some method of standardizing these products, or of ascertaining the real value of diastase by some practical and convenient test.

The Chairman put the motion, which was adopted unanimously, and he appointed Drs. Fite and Stewart to serve on the committee with himself.

The Chairman then delivered his Address, in which he referred to the valuable contributions rendered by pharmacy and analytical chemistry to the science of therapeutics. He deprecated the use of ready prepared formulæ, and secret or proprietary preparations by the profession, and urged upon physicians a closer study of the resources of the Pharmacopeia. The brilliant results from the introduction of the serum-therapy are now attracting general attention to this new method of treatment, and encourage the hope of greater success in future in controlling infectious disease. The use of toxins, for the purposes of immunization, which has been so successful in the biologic laboratory, leads to the belief that this method, though still in its infancy, promises much. He believed that it might be possible to extract the active principle from this class of agents in the same way that quinin is extracted from cinchona, and that in the future these chemical substances, thus obtained, will occupy an important place in therapeutics.

DR. F. WOODBURY said that the use of ready-made preparations by the profession is largely the result of routine practice. Each patient should have his case especially investigated by the physician so as to ascertain the presence of any latent disease, such as nephritis, diabetes, or tuberculosis, for instance, and the tendency to prescribe for symptoms should be discouraged. The serum treatment is still in the empiric stage and cannot be considered well established upon a scientific basis until, as Dr. Hill had suggested, the active principles have been isolated and properly investigated.

DR. STEWART moved that the address be sent to the Executive Committee with a request to report its action thereon to the general session. This motion was adopted.

DR. HILL said that, in regard to immunization by toxins, he would mention a case in illustration. About two years ago, he accidentally immunized a man from erysipelas by injections of serum from the streptococcus erysipelatus. The man had an inoperable sarcoma, and he had tried Dr. Coley's toxins for the purpose of experiment and of amusing the patient rather than from any hope of a good result. At first he used from five to ten minims (.01-0.15 cc.), which afforded a decided reaction,

but finally no reaction occurred after an injection of ten centimeters of toxin. He was absolutely immune. It is generally said that this protection is due to some change in the leucocytes and their secretion, but it is due, in the speaker's opinion, to some modification in the fixed cells of the tissues. There were two sets of results from the above experiment: (1) When a patient is liable to be infected from the streptococcus in a wound, not due to unclean surgery, but in the necessarily suppurating cases, if we know this in advance of operation, we may render the patient immune in this way. (2) The action of the antitoxin in the system is also to be considered. This is a broad field for investigation by organic chemists. Patients become protected against morphin so that large doses have no toxic effects. It has been shown that the blood taken from a rabbit which has been rendered immune from large doses of morphin will render another rabbit, after injection into its blood-vessels, also immune against the drug. This acquired immunity from poisons is accompanied by certain changes in the blood and fixed tissue cells and if, as we know, man can be protected from vegetable and metallic poisons by a course of treatment, he may similarly be protected from various diseases in which toxins are produced. After the reapers in the field of bacteriology have done their work, it will be our duty to take it up where they left off and perfect new therapeutic truths for application to diseased conditions.

SECTION ON NEUROLOGY AND MEDICAL JURISPRUDENCE.

FIRST DAY—JUNE 1ST.

DR. W. J. HERDMAN of Ann Arbor, Mich., Chairman.

DR. HERDMAN delivered the annual address, entitled THE EVIDENCES OF THE PROGRESS OF NEUROLOGY AND MEDICAL JURISPRUDENCE.

He referred to the ready assimilation of new facts and discoveries in the histology of the central nervous system, and the rapid growth of literature in the form of textbooks and monographs. It was most desirable that some effort at uniformity in neurologic terminology be made. The relationship of neurology to the humane sciences has proved stimulating and helpful. In medical jurisprudence the growing tendency to subordinate the *absolute rights* of individuals to fancied claims of society, is to be deprecated. In this connection a recent case in London was alluded to in which the surgeon had, contrary to the express and positive instructions of his patient, removed both ovaries on the plea that otherwise the patient's life would be shortened. Approval of legislation in the direction of unsexing criminals, epileptics, etc., was denounced as an unwarranted infringement of the absolute rights of man. The section should sanction by resolution the attempt at uniformity in neural terms, should relegate the work in medical jurisprudence to a separate section, and should endeavor to make this section the source of exact and authoritative information on the subject of neurology.

DR. CHARLES H. HUGHES of St. Louis read a paper, entitled

THE HISTORY OF AMERICAN NEUROLOGY,

in which he presented an exhaustive historical account of the achievements of American neurologists for upward of a century.

TRUNK ANESTHESIA IN LOCOMOTOR ATAXIA

was the title of an interesting paper by Dr. CHARLES W. BURR of Philadelphia. This was discussed by Drs. Hugh T. Patrick of Chicago, C. C. Hersman of Pittsburg, and Moyer of Chicago.

THE PARALYSES, BY ONE OF THE MANY PARALYTICS, by SAMUEL KNOX CRAWFORD of Chicago, Ill., was read by title.

DR. E. S. PETTYJOHN of Alma, Mich., presented a communication on

THE DIAGNOSIS AND TREATMENT OF INTERNAL CEREBRAL MENINGITIS CHRONICA.

He advocated galvanization of the brain as a valuable adjunct to the treatment of this condition, except in the acute febrile form.

The next paper, on the

DIFFERENTIAL DIAGNOSIS BETWEEN CEREBRAL SYPHILIS AND GENERAL PARESIS,

was by DR. HUGH T. PATRICK, and was discussed by Drs. Carpenter of Cleveland, Moyer and Jones of Minneapolis, and Hughes of St. Louis.

DR. AUGUSTUS A. ESHNER of Philadelphia read a paper on

HEREDITARY LATERAL SCLEROSIS,

in which he detailed cases of a mother and son similarly affected with this disease.

A paper, entitled

A CASE OF THOMSEN'S DISEASE COMPLICATED BY MULTIPLE NEURITIS,

by DR. M. NELSON VOLDENG of Des Moines, Iowa, and one on

PAIN TRAUMATISMS,

by DR. THOMAS H. MANLEY of New York, were read by title.

DR. W. S. WATSON of Fishkill-on-Hudson, N. Y., presented a paper on

MELANCHOLIA AND ITS TREATMENT.

He spoke of a case of myxedematous nature which was aided by the thyroid treatment. The paper was discussed by Drs. Canfield of Bristol, R. I., Hughes of St. Louis, Kindred of New York, and Spitzker of New York.

SECTION ON OPHTHALMOLOGY.

FIRST DAY—JUNE 1ST.

This section was called to order by the Chairman, DR. GEO. E. DE SCHWEINITZ of Philadelphia.

The first paper presented was by DR. HOWARD F. HANSELL of Philadelphia upon

ROENTGEN RAYS IN OPHTHALMIC SURGERY.

In this he described the ingenious methods and devices which had been invented in the application of skiagraphy to

the eye. One of the first successful attempts had been made by putting the photographic film in the nostril and exposing the temporal side of the eyeball to the tube. Since this many successes had been attained by placing the plate or film in the canthus, or binding it upon the temples.

The subject was continued by DR. WM. F. SWEET of Philadelphia upon

LOCALIZATION OF FOREIGN BODIES WITHIN THE EYE
BY MEANS OF X-RAYS.

Dr. Sweet explained how, by moving the tube a certain known distance, two shadows could be obtained upon the plate, and by a triangulation of the two shadows the exact location of the foreign body was determined.

Considerable discussion followed, in which it was stated that no accident or injurious effect had attended the application of skiagraphy to the eye, although in many instances the exposure had been prolonged.

GENERAL SESSION.

SECOND DAY—JUNE 2D.

The second general session of the Association was called to order promptly at ten o'clock by the President, DR. NICHOLAS SENN. Following the reading of the minutes of the preceding day's session, the Chairman of the Committee on Arrangements, DR. H. A. HARE, made announcements referring to the adjourned meeting of the American Medical Editors' Association, and to a communication received from the Atlantic City Medical Society, conveying an invitation to the Association, and to the American Academy of Medicine, to become their guests at Atlantic City on Saturday, June 5th.

THE ADDRESS ON MEDICINE

was then delivered by DR. AUSTIN FLINT of New York. (See page 732.)

On motion of DR. COTTER of New York the thanks of the Association were tendered to Dr. Flint for his able and interesting address.

During the interval preceding the arrival of President McKinley, a number of questions of general interest were considered and acted upon by the members. The secretary announced the *personnel* of the Committee on Nominations. This committee has charge of the naming of officers and of deciding the important point as to where the next annual meeting will be held.

The report of the Executive Committee was then read, and showed that at the present meeting 950 different members were in attendance at the various section meetings, the largest number ever recorded in the history of the Association. It was resolved that in future, in order to expedite the registration of members at coming conventions, the secretary of the Association be constituted a committee of one to conduct in the city where a meeting is to be held, for three days prior to the commencement of the meeting, a bureau of registration for the attending delegates, and that he receive the sum of one hundred dollars annually for such services.

The next question which engaged the attention of the delegates was the selection of the place of meeting for

next year's convention, but no definite conclusions concerning this matter were reached, the subject finally being referred to an appropriate committee for decision. Delegates from Tampa, Fla., Milwaukee, Denver, and Columbus, proposed these cities as meeting places for the Association in 1898.

There were many violent expressions of disapproval, and a great many hot discussions anent the question of railroad rates to members of the Association, which next was taken up for consideration. The charges made by the trunk lines to medical men to and from the meetings of the Association were characterized as extortionate and unfair, and several delegates insisted that a formal protest be entered by the Association against this alleged discrimination, although in the end the consensus of opinion seemed to favor dropping this subject as one which the Association was helpless to remedy.

There now ensued a lengthy discussion relating to the duties of the Nominating Committee, but comment was finally stopped when it was shown that this committee must first report in due order, after which the body of delegates might or might not accept the report rendered them. It was further announced that the Nominating Committee would meet immediately after the adjournment of the morning's session, and again during the afternoon, to take up the business delegated to it.

The conclusion of these business matters had just been reached when the arrival of the President of the United States was announced. The Chief Executive advanced toward the front of the stage, leaning upon the arm of President Senn and escorted by Governor Hastings, Mayor Warwick, Dr. William Pepper, Dr. H. A. Hare, and a number of distinguished cabinet officers and diplomats, who had accompanied the President from Washington. After an enthusiastic reception by the audience, which rose to greet him, President McKinley made the following brief, but impressive, address:

"Although summoned to this city for another purpose, I deem myself most fortunate to find this honorable Association in its semicentennial meeting on the same day, and I could not refrain from taking a moment from the busy program mapped out for me by Dr. Pepper—whose assurance I had before coming here that it should be a day of rest, which I have already begun to realize—I could not refrain from pausing a moment that I might come to this brilliant presence, meet the learned body here assembled, and pay my homage to the noble profession you so worthily represent. You have my best wishes and, I am sure, the best wishes of all our countrymen for the highest results of your profession, and my warm and hearty congratulations on this the fiftieth anniversary of your society."

President McKinley was followed by Governor Hastings, who regretted his unavoidable absence of the preceding day, and expressed himself as highly honored by being invited to address such a distinguished gathering of scientific men, to whom he desired to extend the most cordial welcome of the Commonwealth. During the course of Mr. Hastings' address, he took occasion to say: "As a layman, all I can do in regard to such a gathering

as this is to stand on the sidewalk and watch the procession pass by. Hence, I can only give you the opinion we common, everyday people have of you, and the one opinion we hold to tightly. We laud you for the code of honor that exists in your profession—a code which many can afford to imitate. Your powers are great and untrammelled and your opportunities vast. The lawyer in the forum finds an opponent worthy of his steel; the judge on the bench is bounded by law and by precedent; the statesman is influenced one way and another by conflicting considerations; but the physician, in his court, is judge, jury, advocate, prosecuting attorney—sometimes executioner, and from his court there is no appeal. In the sick-room the doctor is an autocrat, and in that forum the American medical profession has determined that there shall be no room for quack or mountebank."

After the speech of the Governor, Dr. Horatio C. Wood of Philadelphia made a vigorous and well-timed speech, which embodied a resolution protesting against the passage by Congress of the bill now pending to regulate the practice of vivisection in the District of Columbia. Dr. Wood said that if the one hundred thousand physicians in the United States would take this as a personal matter, and act accordingly with their respective Congressmen, their influence in crushing the measure would be irresistible; and added, that every medical man should see to it at once that active measures are taken in regard to this question, which has for its purpose the governmental control of all experiments upon live animals, and renders, in certain instances, the practitioner of vivisection liable to prosecution for criminal misdemeanor. Dr. Wood also remarked that he believed that there must be a special chamber reserved in Hades for the American Medical Association, which has passed good resolution after good resolution concerning this question without effect—for the way to hell is paved with good resolutions. The enthusiasm aroused by Dr. Wood's speech, and the immediate adoption of the contained resolution lasted for several minutes, and, after its subsidence, the meeting adjourned for the day.

SECTION ON PRACTICE OF MEDICINE.

SECOND DAY—JUNE 2D.

The Section met at nine o'clock, with the President, DR. J. H. MUSSER, in the Chair.

The first topic was the sero-diagnosis of typhoid fever. DR. W. H. WELCH of Baltimore opened the discussion with some remarks on the

PRINCIPLES UNDERLYING SERO-DIAGNOSIS.

He called attention to the importance of a proper diagnosis of typhoid fever in its early stages, especially in the South, where the prevalence of malarial and continued fevers made the clinical diagnosis difficult. The discovery of the typhoid bacillus was not immediately followed by the practical results in diagnosis and treatment consequent upon the discovery of the diphtheria and tubercle bacilli. Numerous attempts had been made to obtain cultures of the typhoid bacillus; first, by the juice of the spleen, withdrawn by a hypodermic needle, but the results were unsatisfactory, and moreover the danger

of injury to the organ was considerable; cultures made from rose spots were tried, but proved unsatisfactory. The results obtained with cultures made from the blood were more apparent, but large quantities of blood, as much as ten cc., were required. With cultures obtained in this way good results had been obtained in twenty-seven per cent. of cases. The Elsner method of obtaining cultures from the stools marked an advance in the diagnosis of typhoid fever, but it was disappointing in that its field of usefulness was limited.

The modern method of sero-diagnosis rested upon Pfeiffer's discovery of the principles of artificial immunity, but Pfeiffer's reaction, so-called, had nothing directly to do with the reaction in serum immunity. The principle of Widal's test was that by the addition of one part of blood-serum to ten parts of fluid containing the typhoid bacilli a reaction takes place whereby the bacilli lose their motility and clump together. It had been ascertained by Dr. Wyatt Johnston of Montreal that this power of producing agglutination of the bacilli was retained by dried blood as well as fresh. Dr. Welch was of the opinion that the best method of obtaining the blood was by an incision, or by pricking the lobe of the ear, rather than by blisters or the opening of a vein. This power to cause agglutination of typhoid bacilli possessed by the blood-serum of typhoid patients was also possessed by other serous fluids, as the serum from a blister or the fluid from a serous cavity. High temperature destroys the power of agglutination. It is an open question whether more importance should be attached to the loss of motion of the bacilli or to the clumping, some observers being of one opinion and others holding to the opposite belief. Young cultures, not over twenty-four hours old, should be used in the tests, though still younger (from six to eight hours old) had been used with good results in some cases. He prefers a middle course, and uses and recommends cultures fifteen hours old. As to the culture medium, it did not seem to matter very much whether agar or bouillon was used. The use of old cultures is, he thought, a distinct source of error. The degree of saturation of the test was another point which should receive considerable consideration. With a strong saturation the reaction is obtained more quickly, while with a weak saturation a time limit of about two hours should be allowed. It was his experience that the reaction was more marked in thermostat-cultures than in room-cultures. The degree of saturation recommended by Widal was 1 to 10 or 1 to 15, but later experiments had shown that dilutions of 1 to 40 or 1 to 50 gave better results. The criticism had been made that the colon bacillus gave the reaction in some cases as strongly as the typhoid bacillus, but where there was any doubt in the differential diagnosis of the two diseases the precaution should be taken of making the test with a weak dilution, as the colon bacillus had never been known to react with a dilution greater than 1 to 40. Another source of difficulty in some cases is the late appearance of the reaction. In the majority of cases it could be obtained in the first week, but undoubted cases of typhoid, confirmed by subsequent *post-mortems*, had failed to give positive reaction until the second or third

week, and in a few cases the reaction had been absent altogether. The conclusion to be drawn from this was that a negative reaction was not conclusive evidence of the absence of typhoid. A third source of error was to be found in the fact that the blood of persons who had had typhoid fever retained the power of agglutination for a considerable time.

He suggested that the discussion might very profitably cover the question of the utility of dried-blood preparations as against fresh specimens. While the former method possessed many advantages as a more convenient method, it lacked the quantitative exactness of the latter procedure. He thought it possible, however, that the method of examination with dried blood might be so developed as to furnish a qualitative test.

In conclusion, he laid stress upon the importance of precision in the test, but at the same time he thought the method might be so simplified as to be available for the general practitioner, so that a fairly accurate test might be made at the bedside. For the more exact examinations completely equipped laboratories were necessary and should be at the disposal of the general practitioner, and the establishment of such laboratories by cities or States should be encouraged.

He was followed by Dr. Wyatt Johnston of Montreal, whose experience with the serum test covered over 600 cases, more than half of them typhoid. He believed that other diseases, such as cholera and bubonic plague, would be shown to have a reaction. He had been led to devise the method of dried-blood tests on account of the distance that specimens had to be sent for examination, and it was found that the dried blood could be sent by mail. Dried blood, he thought, clumped more readily than serum.

The alkalinity of the culture was important, as, if it were acid, the reaction would not take place. Young cultures should be used in preference to old cultures. With proper cultures, if loss of motion took place without clumping, it might be regarded as a pseudo-test, or if clumping took place without complete loss of motion, the reaction should also be regarded with suspicion.

DR. R. C. CABOT of Boston gave a

CLINICAL REPORT ON SERO-DIAGNOSIS.

The statistics of foreign and American observers which he had examined gave the following results:

In 1826 cases of supposed typhoid, 1740 or 95 per cent., autopsy, confirmed the serum test.

In 1649 cases *not* typhoid, 1592 (or 96 per cent.) were negative. Total, 3475 cases; 95.8 per cent. of which confirmed the serum test; 2 per cent. proved incorrect.

In the 101 cases supposed to be typhoid 96 had given positive reaction, while 5 had failed. Three of these were seen late in the disease. One was seen early in the disease, and persistently gave a negative reaction, though the *post-mortem* examination confirmed the diagnosis of typhoid.

In 301 cases, with diagnosis other than typhoid, 300 were negative, while 1 gave a positive reaction. This was a case of pernicious anemia in a negro. He had been in the habit of using dilutions of 1 to 10, which Dr.

Welch and others had asserted was too strong, but his time limit was from fifteen to thirty minutes as against two hours. He used the quick, or microscopic method, in all his examinations. The phenomena necessary to constitute a typical Widal reaction were a cessation of motion and a clumping of the bacteria. With one of these elements present, and the other wanting, he would not call the case typhoid. For the purposes of statistics he had taken the first day in bed as the first day of the disease, and thought this method of calculation open to no stronger criticism than any other method of reckoning the beginning of an attack. The length of time which a patient who had once had typhoid would continue to show the reaction was *sub judice*, the longest period reported being thirteen years. Again, the reaction might be intermittent. Thus, it might be present one day, absent the next, present the third, etc.

The susceptibility of the blood of negroes to the test had been frequently referred to. Dr. Geo. B. Shattuck had examined the blood of seventeen negroes, and got positive reactions in two cases not known to have had typhoid, and in three others who had positively not had typhoid. One of these was the case of pernicious anemia above referred to. He thought the more careful tests should be made in a laboratory, but sufficiently accurate tests could be made at the bedside by the physician with a knowledge of bacteriology. The Widal test was certainly of very material aid in the diagnosis of typhoid.

DR. BLOCH of Baltimore discussed the subject, giving a clinical report on sero-diagnosis. Microscopic tests were made by diluting sixteen times. By means of the hemoglobinometer the exact amount of dilution could be determined. Examinations made at the same time with both fresh and dried specimens showed the results to be practically the same. The earliest date on which the reaction was obtained was on the sixth day, the first day of the disease being considered as that on which symptoms compelled the patient to give up work. One hundred and seven examinations in 46 cases of typhoid gave a percentage of failure of 6.5 per cent. The culture medium used was slightly alkaline, though experiments were made with acid and neutral media. The acid medium did not show any precipitate of dead bacteria. Especial interest attached to the use of the test in cases of tuberculosis. By this means it was possible to make a diagnosis at an early date in cases of tuberculous peritonitis, tuberculous meningitis, and even pulmonary tuberculosis. He gave the histories of several cases in which the diagnosis between tuberculosis and typhoid could have been made only in this way.

DR. GERHARDT of New York, in the absence of Dr. H. M. BIGGS, read a paper on

THE SERUM TEST FOR THE DIAGNOSIS OF TYPHOID.

The serum used in the tests by the New York Board of Health was obtained from blisters. The microscopic test was used whenever possible, the macroscopic seldom being resorted to. Dilutions of 1 to 10 were generally used. Cultures eighteen to twenty-four hours old and of great virulence were employed. The cultures were obtained.

from Pfeiffer. The distinctness of the reaction was more marked with virulent cultures. The medium might be agar on bouillon. The tests made in the laboratory of the New York Board of Health were generally made with dried blood with a 1 to 10 dilution and a fifteen-minute time limit. If positive reaction is obtained from these tests a positive diagnosis of typhoid is made, but if agglutination did not occur in fifteen minutes or required a greater dilution a request for a further test with serum was always made. There was a decided advantage in the use of serum obtained from a cantharidal blister. Others had suggested a dilution of 1 to 30 or 1 to 50 and a time limit of two hours, but there did not appear to be any advantage in this procedure.

DR. S. S. KNEASS of Philadelphia gave a brief clinical report on sero-diagnosis. There did not seem to be any connection between the virulence of the disease and the character of the reaction. The earliest date at which the reaction was obtained was on the fifth day.

A CLINICAL REPORT ON SERO-DIAGNOSIS,

by DRS. J. H. MUSSER and JOHN M. SWAN of Philadelphia, was read by DR. SWAN.

The tests were made with dried blood. One hundred tests were made. In 9 the blood was taken from children under 15, and in the remainder from adults; 26 from females and 74 from males; age and sex seemed to exercise no influence. The cases were divided into four classes: (1) Typhoid fever during the disease; (2) during convalescence from typhoid; (3) where typhoid had been present at some time, and (4) where typhoid had not been diagnosed. In the latter, the reaction was absent in all cases, among which were cases of pneumonia, tuberculosis, and catarrhal fever. His conclusions were: (1) that age and sex exercise no influence; (2) that the reaction might be obtained during the occurrence of the disease as early as the seventh day; (3) the reaction disappeared at varying periods after the cessation of the disease; (4) the reaction could not be obtained from blood taken from patients suffering from diseases other than typhoid.

DR. MARK W. RICHARDSON of Boston read a paper, entitled

ELSNER'S METHOD OF DIAGNOSIS IN TYPHOID FEVER.

Elsner's gelatin-culture medium had first been prepared with carbolic acid, but as a result of later experiments he had been led to substitute potassium iodid, and the inoculation of this gelatin with the stools of typhoid fever had been very successful. No other bacteria than those of typhoid fever could be made to grow upon this medium. He had been led to examine this method of testing for typhoid fever partly from a desire to see whether it would confirm the tests made with the blood-serum, and partly to see whether it could be relied upon in those cases in which Widal's test failed to give a reaction. The result of his investigations convinced him that the serum test was preferable on account of its greater convenience in those cases where it gave a positive reaction, but cases in which the serum test had failed might show a typical reaction by Elsner's method. An examination of twenty-

nine cases other than typhoid showed no bacilli by Elsner's method, or the isolation of bacilli was imperfect. The statement made that the typhoid bacillus was an ubiquitous organism was not confirmed by this method as the examination of the non-typhoid cases had failed to show the presence of the bacillus.

He summed up his conclusions by stating that the value of Widal's serum test was greater by reason of its simplicity, but a case which had failed to react to this method might still show the typical typhoid reaction if the stools were examined by Elsner's method.

DR. N. S. DAVIS of Chicago said that according to his experience ninety per cent. of cases of genuine typhoid gave a positive reaction to the Widal test, and in six per cent. there was a partial reaction. In three per cent. of cases there was no reaction whatever. The time at which the reaction could be obtained varied, and had no relation to the severity of the attack. In two and one-half per cent. of the cases with clinical diagnoses other than typhoid, a reaction was obtained, but in all of these cases there was a history of a prior attack of typhoid. In view of the fact that the reaction was not a constant attendant of typhoid fever, he suggested that it would be more correct to call it a symptom of typhoid fever, rather than a test for typhoid. It stood in the same category as rose spots. When present with other symptoms of typhoid, these were of value. So it was with the serum test; it did not furnish conclusive evidence.

DR. H. A. WEST of Galveston, Tex., said that the test promised to be of especial importance in his section of the country, and he hoped it would be the means of settling the vexed question of diagnosis between typhoid, malaria, continued fever, thermic fever, etc. Many of these fevers failed to respond to the salts of cinchona, and he was of opinion that such cases were typhoid in character, and it was to be hoped that this test would clear up the matter.

DR. J. B. HERRICK of Chicago gave the experience of Dr. George H. Weaver, of the Rush Medical College, in the diagnosis of typhoid fever by means of Widal's test. Several of the cases examined had all the symptoms of typhoid fever, and were also tuberculous, and in these the test failed to give a reaction. It was possible that this failure of the test was merely a coincidence, but it opened up the question whether this test was applicable in cases of mixed infection.

Immediately after the Section was called to order for the afternoon session the following officers were elected for the ensuing year: Chairman, Dr. Fiske of Denver, secretary, Dr. Albert Jones of Buffalo.

DR. A. P. OHLMACHER of Cleveland read a paper, entitled

OBSERVATIONS ON TWO EXAMPLES OF TYPHOID MENINGEAL INFECTION.

The author gave the clinical and pathologic aspects of the cases. The spleen weighed 220 grams; the ileum was the seat of typical typhoid ulcers, and a hematoma was located in the brain substance. Cultures taken from the meningeal hemorrhage gave perfect growths of the typhoid bacillus.

The second case was like the first, but owing to lack of time Dr. Ohlmacher gave a brief synopsis of the two cases. Both gave clinical evidence of typhoid fever with suppurative leptomeningitis. Bacteriologic investigation gave large numbers of typhoid bacilli and of no other micro-organisms, while an exhaustive investigation of other organs furnished undoubted evidence that the cases were true typhoid. In the second case there was bronchopneumonia as a complication, and typhoid bacilli, as well as staphylococci, were demonstrated in the lungs. There was also endarteritis of the cerebral arteries.

The next paper was read by DR. WILLIAM OSLER of Baltimore, entitled

RELAPSES IN TYPHOID FEVER.

In 500 cases of typhoid fever treated in Dr. Osler's wards at the Johns Hopkins Hospital, there was a percentage of 8 per cent. of relapses, about the same as that noted by Liebermeister, but a much larger percentage than that given by Murchison. Physicians were apt to shift the responsibility for relapses to errors of diet, but it was his experience that error in diet was not responsible in any considerable number of cases. The term "relapse" should be limited to those cases in which there were distinct evidences of reinfections after a period of apyrexia. Rise of temperature and return of dangerous symptoms without a period of absolute freedom from fever and serious symptoms should be regarded as an intercurrent relapse and not as a true relapse.

The sources of reinfection were as yet unknown, but a possible source was the lingering of the bacilli in the mucous membranes of the system. Chiari also made the interesting suggestion that the typhoid bacilli remaining in the gall-bladder might become the source of a secondary infection. In nineteen out of twenty-three cases of typhoid fever Chiari demonstrated typhoid bacilli in the gall-bladder. Relapses might be single, double, or rarely, triple. Several cases where there had been four or five relapses had been reported, and Dr. DaCosta stated that he had had a case with five relapses. As illustrating the length of time a case of typhoid fever might continue, he related the history of a case in which, after a period of six-weeks' freedom from fever, a relapse occurred and later a second relapse, so that the original attack, with the two relapses, covered a period of six months. The relapses were not always of a similar character in their inception as the original attack, as the text-books used to teach. The fever did not increase by gradual steps, as the original fever did, but, on the contrary, might go up with two or three short bounds. In other cases the relapse might be the counterpart of the original attack. He did not believe that the Brand system of treatment had anything to do with the occurrence of relapses. The Brand method was used extensively in the wards of the Johns Hopkins Hospital, and the proportion of relapses there was not excessive, and no one could say, from a study of those records, that hydrotherapy had anything to do with such occurrences.

PERICHONDRITIS OF THE LARYNX IN TYPHOID FEVER was the title of the next paper read by DR. M. H. FUSSELL

of Philadelphia. The case of which this paper was a report occurred in a man thirty years of age, who came under his observation in December, 1894. There was considerable hoarseness, and the patient afterward developed pneumonia. After eating an apple he was seized with stenosis, and an examination showed an edema of the larynx. Perichondritis of the larynx was diagnosed, and tracheotomy was suggested, but the patient refused to have the operation done. He died on the seventh day, and the autopsy showed that there was a large perichondrial abscess. Hoarseness, with respiratory distress were the only symptoms complained of. The complication was very infrequent, but its infrequency did not excuse physicians and writers for neglecting it. The only treatment was tracheotomy.

DR. H. A. WEST of Galveston read a paper upon THE RATIONAL ANTISEPTIC TREATMENT OF TYPHOID FEVER.

He was skeptical of the value of the so-called abortive treatment of typhoid, believing, as he did, that this was a self-limited disease. Nor did he believe in the efficacy of the antiseptic treatment, for before the disease attained its height the bacilli would have passed through the intestinal tract into the blood, and no drug known could reach them there. His experience with the various "cures" recommended had not been such as to commend them to his judgment. The rational treatment of typhoid—the only antiseptic treatment—"begins at the mouth and ends at the bed-pan." The way to give antiseptics was to withhold anything in the way of food or medicines that would require any antiseptics, and to use the tooth-brush frequently for the dislodgment of particles of food that, accumulating in the teeth, might decompose and cause fermentation. One of the chief difficulties in the treatment of typhoid was the gastric disturbance which was generally a complication, for in no disease, except cancer of the stomach, was the power of the stomach to digest food so weakened as in typhoid fever. In typhoid fever the stomach might lose half its bulk. Added to this decrease in the amount of gastric juice there was also a decreased secretion of hydrochloric acid. For these reasons we should abstain from loading down the stomach with solid food which it could not dispose of, and the condition should be treated by the administration of pepsin, hydrochloric acid, and the like, which, in this case, were antiseptics in the proper sense of the word. It was now proved that the typhoid bacilli left the mucous membrane of the intestinal canal early in the stage of the disease and entered the blood, so that the administration of antiseptic drugs could have no effect upon them. In the rational treatment of the disease was included a plentiful supply of water to flush out the stomach, and good results follow copious irrigations of the large intestine.

The next paper read was by DR. J. N. UPSHUR of Richmond, Va., upon

THE TREATMENT OF TYPHOID FEVER.

The author went into details as to the method of disinfecting bed-pan, bed-clothes, keeping the patient clean, etc. He deprecated the use of alcohol in the early stages

of the disease, except in the cases of persons accustomed to its use. The headache, he said, required no treatment, for it would disappear spontaneously in the second week. Phenacetin might be used with caution, but in general the use of the coal-tar derivatives should be sedulously avoided. Bromid of soda should be given for sleeplessness, and for coma vigil there was nothing that could take the place of opium. Somnolence should be treated with alcohol. Nausea and vomiting were rarely of sufficient severity to require treatment, but when existing, drop doses of the tincture of iodine were useful. Constipation was not an indication of grave intestinal lesions, and laxative drugs were to be avoided. Salol should be administered when the stools were offensive, and sordes called for the internal use of turpentine. Strychnin, with nitroglycerin, should be given for a weak heart. Peritonitis demanded treatment with tincture of opium, or hypodermic injections of morphin, but celiotomy was not justifiable, as the probability of saving the patient was very slight. The bladder should be emptied frequently, either naturally or by the catheter.

He severely arraigned the abortive and antiseptic treatments in vogue as being thoroughly irrational. Woodbridge's method for the abortive treatment of typhoid made claims of such brilliant results that physicians were startled, and made them ask themselves the question whether they had been groping blindly in the dark up to this time. He confessed that he had never tried the treatment because he regarded his patients as of too much consequence to be subjected to such danger. With his knowledge of the disease and of its self-limited character, he could not understand the wonderful results claimed for the treatment by its originator unless the age of miracles had returned. The testimonials which had been filed regarding the efficacy of the treatment were of no more value than similar testimonials for some "cancer cure" or "kidney cure," and other "cures" *sui generis*. Considering the claim of Dr. Woodbridge that he had never had a death from typhoid fever since using his method, was it not strange, he asked, that no writer and no authority had ever recognized the treatment?

SECTION ON SURGERY AND ANATOMY.

SECOND DAY—JUNE 2D.

The meeting was called to order by the Chairman, DR. SAYRE.

The first paper was read by DR. CARL BECK of New York on the

TECHNIC OF PNEUMOTOMY.

He said that particular attention should be paid to the details of asepsis. The skin of the patient and the hands of the operator should be very carefully prepared, as well as all instruments, dressings, and other materials which may come in contact with the wound. As a rule, the eighth rib is selected. An incision about five inches long is made over the suspected area upon the rib. The periosteum is raised throughout the entire circumference of the rib, and the section of bone removed by shears. The muscles, fascia, periosteum, and pleural membrane are ligated by silk ligatures, which are passed by means of

strong needles. The pleura is then divided. If the lung collapses the incision into the lung must be delayed for a day or two. If the lung moves freely, sterile gauze may be packed about the region to be operated upon to avoid infection of the cavity from escaping pus. If palpation fails to disclose the accumulation, the exploring needle may be thrust into the suspected area. If this does not reveal pus, then the slightly heated Paquelin cautery may be introduced in the direction of apparent trouble. After the cavity has been opened, irrigation and exploration should be avoided, as troublesome hemorrhage might result. A narrow strip of iodoform gauze is introduced into the cavity for drainage.

The speaker has operated upon four cases of lung abscess and all of the patients recovered. Anesthesia should be employed only if the pulse be strong enough, which is rare in these cases. Chloroform is usually to be preferred to ether if an anesthetic is used. In only one of the cases was the diagnosis of lung abscess made before operation. Two of the four cases had been diagnosed as pyothorax, and the fourth was thought before operation to be a subphrenic abscess.

W. B. DE GARMO of New York reported

TWO HUNDRED AND FIFTY BASSINI OPERATIONS FOR THE CURE OF HERNIA, WITHOUT MORTALITY.

The 250 operations were performed on 216 patients. One patient was five months old and had a strangulated right scrotal hernia. There was also a scrotal hernia on the left side. Age is no contraindication to this operation, as the results have been as satisfactory in the aged as in the young. The success of Bassini's operation depends upon the removal of all superfluous tissue from the cord, and upon the formation of a new muscular floor for the canal. In the suppurative cases the infection seemed to have been superficial. In the cases in which the vitality of the tissues has been lessened by the pressure of a truss, infection is particularly apt to follow operation even when the most careful antiseptic details have been carried out. Contrary to the expectation of the speaker, the cases which suppurated had not shown a greater tendency to recurrence than had those which ran a sterile course. Silkworm gut was employed for the buried sutures in the earlier cases, but as the sutures caused irritation in a number of instances its use was discontinued and kangaroo tendon was substituted. The latter has proven entirely satisfactory. The author believes that ninety-five per cent. of the patients operated upon by this method will be cured even if observed for five years. Of the 250 operations there have been six recurrences and three patients are at present under suspicion. It has been possible to explain the recurrence in every instance. Two were the result of violence some time after the operation. One was the result of a varicocele that was not treated at the time of the herniotomy. In one case the muscles were in such an advanced state of fatty degeneration that the sutures failed to hold, and in two cases the patients took ether very badly, and the recurrence was due to undue haste in terminating the operation.

In the discussion DR. H. O. MARCY expressed his belief in a congenital defect as the cause of hernia. He thinks the presence of the infundibular process of Broquet allows of a slight protrusion which gradually increases. He has operated on a child three months of age, and upon an adult in the eightieth year of life. He thinks that over ninety per cent. of his cases have remained cured.

DR. OCHSNER called attention to the patients with hernia who come for treatment at the two extremes of life. He has observed that patients who have worn a truss for years find that the hernia is not retained when the tenesmus and dysuria of prostatic hypertrophy become pronounced. In these cases he has adopted the operation recommended by Dr. White of Philadelphia, namely, either castration or ligation of the cord, with relief of the vesical symptoms, when the truss would again control the hernia. In the case of hernia in children he has frequently found the straining caused by phimosis to interfere with the cure of hernia, and in these cases the operation of circumcision has enabled him to cure the patient without a hernial operation.

In closing the discussion, Dr. De Garmo said that in the case of undescended testicle, if the cord is too short to bring the organ down into its proper position, he prefers covering it up with the muscular layer, outside of the peritoneum. He has had satisfactory results by this method.

A paper on

ANIMAL SUTURE, ITS PREPARATION AND TECHNIC OF APPLICATION,

by DR. H. O. MARCY was read by title.

After the meeting was called to order for the afternoon session, the following officers were elected for the ensuing year: Chairman, Dr. John B. Murphy of Chicago; secretary, Dr. W. D. Rodman of Louisville, Ky.; executive committee, Drs. J. Ransohoff of Cincinnati, C. A. Wheaton of St. Paul, and Reginald H. Sayre of New York.

DR. R. HARVEY REED of Columbus, O., read a paper on

ANCHORING THE KIDNEY.

The condition of floating kidney demands our attention, because it is apt to lead to hydro- or pyonephrosis. The use of abdominal bandages and pads of all sorts the speaker believes to be worse than useless. He has shown by experiments on the cadaver that no amount of pressure which could possibly be borne without injury will keep a movable kidney in place.

The operation which he advises is as follows: An incision two or three inches in length is made in the abdominal wall, anteriorly, over the normal situation of the kidney. Two or three fingers are introduced into the abdomen and the kidney replaced. The intestines are displaced to the inner side, and a suture of silk or other material, attached to a special needle six inches in length, is passed through the kidney-substance between the eleventh and twelfth ribs out through the lumbar muscles and skin. The needle is unthreaded and withdrawn. The other end of the thread is passed in the same man-

ner a short distance from the point traversed by the first. The two ends of the suture are then tied over a small pad of gauze in the loin. These sutures are removed between the tenth and the fourteenth days.

He prefers this method to the usual lumbar operation on account of the ease and celerity with which the operation can be performed and the security of the results.

In the discussion DR. THOMAS of Pittsburg described a method of anchoring the kidney by splitting the fibrous capsule and dissecting flaps in each direction by means of which the organ may be very firmly fixed. This is done through the usual lumbar incision.

DR. J. B. DEEVER of Philadelphia read a paper on

THE COMPARATIVE MERITS OF DIFFERENT OPERATIONS FOR STONE IN THE BLADDER.

He prefers litholapaxy in all cases in which it is possible to introduce the necessary instruments. He operates, when possible, for stricture, and proceeds at once with the litholapaxy. In strictures of the deep urethra that require cutting, he performs the operation of perineal lithotomy and divides the stricture at the same time. If the stone is too hard or too large to crush he would perform suprapubic cystotomy.

DR. DEFOREST WILLARD and DR. A. W. GOODSPEED of Philadelphia gave a demonstration of the technic of the Röntgen rays, with its practical application to surgery, which was illustrated by means of stereopticon views. DR. GOODSPEED described the modern apparatus and its manipulation, and showed a number of views of normal structures which he claimed surgeons should be familiar with before they can properly interpret skiagraphs of abnormal conditions.

DR. WILLARD showed a number of photographs illustrating a number of conditions resulting from diseases and accidents. He called attention to the difficulty of interpreting many of the photographs when first presented. He did not think the skiagraph should be accepted at present in medico-legal cases in preference to means of examination which are better understood and more reliable. In common with other surgeons, he has made use of the X-rays in cases of fractures and dislocations, foreign bodies, bony outgrowths, inflammatory affections of the joints, etc.

SECTION ON OBSTETRICS AND GYNECOLOGY.

SECOND DAY—JUNE 2D.

The section convened at nine o'clock and was addressed by DR. AUGUSTUS GOELET of New York on

THE TECHNIC OF VAGINAL SECTION, EXCLUSIVE OF HYSTERECTOMY, FOR DISEASED APPENDAGES AND SMALL PELVIC TUMORS.

He claimed that anything that will lessen shock, reduce the mortality, and shorten the time of the operation, is to be desired, and all of these can be claimed for vaginal section. In certain conditions this operation is much to be preferred, although in some cases abdominal section is the better operation. The advantages of the vaginal route are: (1) The patient more readily consents to this operation, and therefore the diseased condition can be

removed earlier. (2) It is of service when the condition of the patient does not seem to be grave enough to require the more formidable operation of abdominal section. (3) It is useful when an exploration of the pelvis becomes necessary in order to clear up a diagnosis. (4) The vaginal operation is best when subsequent drainage of the pelvis is required. It is applicable for small pelvic tumors, ovarian cysts after they have been evacuated, pyosalpinx, hydrosalpinx, and hematosalpinx; for the removal of small fibroids by myomectomy, for extra-uterine gestation, and for pelvic hematocoele. The technic in the case of cysts is as follows: The pubes and vulva are thoroughly washed and shaved, and the vagina scrubbed out and irrigated. The patient is then placed in the exaggerated lithotomy position, the cervix is seized and dragged down by a volsellum forceps, and the uterus curetted and packed with iodoform gauze. The cervico-vaginal fold is the guide to the incision, which, starting at the central point, extends half way round the cervix to either side. Having opened the vaginal mucosa, the dissection is continued by means of the blunt edge of the knife. No effort is made to control the hemorrhage from the small vessels that may be cut, until the peritoneal cavity is opened. Then the peritoneal and vaginal fold are united by means of sutures, and the bleeding thus perfectly controlled. The pelvis is then explored and the diseased structures are drawn down, enucleated, and the pedicle ligated, the specimen being removed intact if possible. If it is too large to permit of this, it is drawn down as far as possible into the incision to avoid contaminating the surrounding pelvic structures, and then tapped and finally enucleated.

Dr. Goelet seldom uses a trochar. Irrigation of the vagina should be avoided if possible; when it is employed he uses only normal salt solution for the purpose. Prolapse of the intestine is prevented by means of gauze packing. Solid or semisolid tumors are more difficult of removal. In the case of larger fibroids he prefers abdominal section, although even these may be removed by morcellation. If the anterior wall is prolapsed in any given case the bladder must first be explored by a sound in order to precisely locate it and thereby prevent wounding of that viscus. The cervix, in opening the anterior cul-de-sac, should be drawn back and the incision made to hug it whereby wounding of the bladder may be prevented. If drainage is not required, the vaginal wound may be closed by sutures, although this is not necessary. If deemed necessary, a strip of sterilized gauze may be carried through the incision and packed around the stump to prevent the formation of adhesions to the intestines. This may be left in place for twenty-four hours and then withdrawn in part. The following day the fresh vaginal gauze and the remainder of the pelvic gauze is withdrawn. Union takes place in six days and the convalescence is usually uninterrupted.

DR. H. A. KELLY of Baltimore agreed with Dr. Goelet in all of his conclusions. He thinks vaginal section is preferable in all cases of relaxed vagina, or when the patient prefers it to the abdominal route. By this method he has treated small ovarian cysts, dermoid tumors, and pelvic

abscesses almost without exception. He has tabulated nearly 100 such cases. He prefers here, however, the method of Edebohls, in order to maintain a sufficient avenue for free drainage. He secures this by means of an elliptic incision with the removal of a large crescentric piece of tissue. He also scrapes out the lining membrane of the abscess and then packs it with gauze, thereby securing healing by granulation without pus-formation. For extra-uterine pregnancy he prefers this method, especially in the old ruptured cases with pelvic hematocoeles. He holds himself ready, however, to go ahead with an abdominal section in case of extreme hemorrhage. In the case of cystic ovaries, and the like, he prefers Pryor's method of inspection of the pelvic cavity, the patient being elevated and long retractors being introduced. He excludes from this treatment all cases in which conservative operations are intended. It is also not of service in cases requiring delicate manipulations.

DR. JOSEPH EASTMAN of Indianapolis has been interested in this method for some years. He emphasized some points in the technic and dwelt on the importance of Sims' posture in all vaginal operations. He said that he could not be induced to operate in the exaggerated lithotomy position. The cervix may be disinfected in the manner suggested in the paper, but still it is a source of infection and may infect the wound. He has never seen prolapse of the intestines occur when Sims' posture was used after a piece of gauze was introduced; nor in this position will infecting material pass up into the wound. He thinks a handlight is of more service than a headlight. He always has his assistant over-dilate the rectum first, so that the vulvar space is increased posteriorly. The Sims' speculum then retracts the relaxed tissue much more readily than other speculae will do.

DR. HAGGARD of Nashville referred to the Graffe method of traction-ligature. The only objection to it, he said, was the difficulty met with in its introduction. Graffe first used this ligature in Emmet's service, and it has been used with success in other conditions in general surgery. Anterior colpotomy he claimed is at times more useful than abdominal section in fat women.

Dr. Goelet, in reply, said that the technic described in the paper is not meant to apply to incision for pelvic abscess. He admits that it is easier to do conservative work through an abdominal incision, and yet he can do some of it through the vagina. Infection from the cervix is more imaginary than actual. The cervix, by this method, is generally carried well out of the way. He did not see the advantage of the Graffe knot, and has always preferred the dorsal position for vaginal incisions.

DR. E. E. MONTGOMERY'S paper on

THE TREATMENT OF PUERPERAL SEPSIS

was read by title.

THE DESTINY OF VAGINAL HYSTERECTOMY [FOR MALIGNANT DISEASE]

was the title of a paper read by DR. LESTER C. HALL of Kansas City, Mo. He offered conclusions gleaned from personal experience and from the literature of the day. No tissue, he said, is more prone than the uterus

to take on malignant degenerative processes. Lacerations due to childbirth and the presence of irritating discharges predispose thereto. In addition, irregular flow is believed by many women to be of common occurrence, and hence malignant conditions are often overlooked. Even a fetid discharge does not always excite apprehension and in these cases the invasion of the surrounding tissues not infrequently prevents the adoption of the operation of hysterectomy. As a result many of the cases that are thus presented are inoperable, at least by the vaginal route. The removal of infected glands and the surrounding infected tissue is, in his mind, impossible by the vaginal route; hence, we are compelled to look further for other methods of dealing with malignant disease. The method that admits of thorough inspection of the diseased parts and thus facilitates their removal will become the best method. He believes that vaginal hysterectomy will shortly be restricted to cases of early carcinoma limited to the cervix. Clarke's method is probably the operation that will become generally adopted for more advanced cases. The objection that has been advanced that this operation is too long and too tedious, will be overcome by the practice that makes perfect.

DR. JANVRIN of New York said he had been immensely interested in vaginal hysterectomy for the last fifteen years and had performed the operation many times. He is aware that many of the patients do come too late for cure, but he believes that the people are becoming educated in the matter and now are coming earlier than formerly. In the majority of his cases the operation has been done in the early stage before systemic infection has occurred and the value of the operation of vaginal hysterectomy he believes depends entirely upon this point. If the patients are seen before general infection occurs such cases can be operated upon thoroughly and with success. Thirty-three and one-third per cent. of his cases are living now at periods of three to fifteen years after the operation. If the disease has extended beyond the cervix, and much beyond the endometrium and into the peritoneal covering, these cases are not the subjects for vaginal hysterectomy nor for any other radical operation.

DR. EASTMAN does not believe vaginal hysterectomy is destined to obscurity. The relief from the symptoms and the prolongation of life is sufficient to justify the operation in each and every case, no matter how far advanced. By such means he believes we may also educate doctors to recognize the value of the earlier operation so that they will bring their patients at the proper operative period. The incision into the vaginal tissue should be free and should extend well beyond the diseased area. He also brings the pedicle down and fixes it within the wound where he can promptly see any return of the disease.

DR. DUFF of Pittsburg agreed with the last speaker in all that he had said. In operations done by him through the vagina he has had patients live from three to thirteen years; without the operation, they will invariably die within a year. The great point in the question is the fact that in the vast majority of cases the women have not only been careless themselves, but they have been in-

formed by their attending physician that they were suffering merely from a change of life. He has never seen a woman who was healthy have any menstrual trouble during the period of the climacteric. He would impress upon the public the importance of frequent vaginal examination of all child-bearing women.

DR. MASSEY of Philadelphia desired to report a new and most valuable cure of cancer, *viz.*, the cataphoretic method, whereby mercuric oxychlorid can be diffused throughout the tissues and thereby destroy the malignant growth. He has the record of four out of eight cases that were so cured. He believes that this method will replace the vaginal operation. In employing it he uses, if necessary, a current of the strength of 1000 milliamperes.

DR. MARCY of Boston said that if we accept the theory that cancer is at first a local and then a general condition, we can have but one answer to the question as to the operative treatment, and that is, that vaginal hysterectomy is the proper procedure to adopt. Scarcely more than a decade since we first held that such an operation was the correct one, but the question now is, what are its limitations? The trouble formerly was that the local physician first tried his own application until the case had progressed too far for operation. This is fortunately not so common now. If the disease has become disseminated throughout the broad ligament it is quite another matter, and the operation is not possible.

DR. BOVEE of Washington entered a plea in the same direction that Dr. Marcy had indicated. Vaginal hysterectomy in his experience has been very beneficial in late cases. He has operated in such cases and some of the patients are still living, two years after the operation. The surgical operation accomplishes at one application what electricity does only after repeated applications, and the latter method permits of the possibility of the further spread of the disease in the intervals of treatment.

DR. DUDLEY of New York said that if the patient came with the uterus free, vaginal hysterectomy is the proper operation, but if there is intrapelvic disease and the uterus is fixed, or if the vaginal wall is involved, then an entirely different operation should be performed. The limitation of the disease must be first determined; if it is not limited to the organ the combined method should be used in order to accurately ascertain the extent of involvement. The destiny of vaginal hysterectomy will depend on these points.

DR. FREDERICKS of Buffalo called attention to the different rate of growth of various cancers. He has recently seen a case in which the cervix had been the seat of the growth for over seven years, and there is still but little extension. In any given case it cannot be determined whether the growth is going to be rapid or slow.

DR. KELLY believes that the destiny of vaginal hysterectomy is that it will be performed by the abdominal route, by which means the large wings of the broad ligaments can be removed and all the involved tissues dissected out. Preliminary catheterization of the ureters is the one essential feature in this operation to enable one to keep these organs under the finger and thereby avoid injuring them. He believes that many physicians cannot

recognize cancer of the uterus even in its late stages. The immediate mortality of the Clarke operation is slightly greater than that of vaginal hysterectomy, but the ultimate results are better. He would insist upon repeated examinations of women who have borne children, beginning within four months after labor, and repeated at suitable intervals.

DR. JOSEPH PRICE said that a discussion is very much smoother than an operation. In inoperable cases of carcinoma of the uterus, he uses the curette and the cautery, and the probability is that the patient will live for eighteen months or two years, or even more. He now operates on any case of cancer which comes to him. He prefers the vaginal route to all others. He has repeatedly removed half the vagina in these cases. He is also in favor of the use of clamps, which can be passed further away from the uterus than can any ligature. As to recurrences of the disease, they are usually to be found in the bowel and bladder, and in these cases the suffering is intense. Many of the cases which are operated upon, and in which the disease fails to recur, are in reality simply cases of erosion of the cervix.

The Nominating Committee, through Dr. Eastman, chairman, reported the following officers for the ensuing year: Chairman of the Section, Dr. Joseph Price of Philadelphia; secretary, Dr. Lester Curtis Hall of Kansas City, Mo.

SECTION ON DISEASES OF CHILDREN.

SECOND DAY—JUNE 2D.

DR. LOUIS FISHER of New York continued the discussion of diphtheria antitoxin by saying that he had been skeptical concerning antitoxin on account of the profession's experience with tuberculin. What he saw in Berlin in 1894, was only a repetition of what he had heard from Behring in 1891. In the summer of 1896 at the Children's Hospital, Bazinski told him that he no more dreaded diphtheria now than he did a case of ordinary constipation.

As the dose of castor oil in a given case of constipation depends on the cause, so does the antitoxin dose depend on the case. Some he saw, got well with 6000 units, others with a smaller dose, but as a rule a round dose of 2000 units is indicated in malignant cases.

All will agree that there is no fear as to the results. The membrane is thrown off in twenty-four to thirty-six hours. He had seen a case of malignant diphtheria, with fetor temperature of 101° F., which is considered a malignant low temperature, and pallor from the drenching of the system by septic elements. Here, as was his rule with all cases, the imperative indication was met first, the asphyxia relieved by a tube, and the antitoxin was then administered with little fear of the result if the dose is repeated when indicated.

He said that Dr. Jacobi had not been anxious to use the serum till others had tried it, but now, as he stated in his book, he almost considered it a crime not to use it.

DR. ARNOLD of Pennsylvania had begun the use of antitoxin early and for a time all was auspicious; there were prompt manifestations of its beneficent influence in

the separation of the membrane; the prognosis was in a measure positive, proved by the changes observed in the patients after an injection. After a year's use he had seen a case of diphtheria, used antitoxin, and the child died, though, before he saw it, the case was regarded as one of simple tonsillitis. Another case had an abnormally slow pulse—50, 45, 40—and death followed, and in another, death ensued from suppression of urine. The serum administered to these patients was from a reputable and prominent manufacturer, all of the same series and labels. The bacteriologist of this house had been loath to give any explanation of the occurrence.

DR. COOK of Chicago stated that he would reply to the statement often made, that all cases recovering were evidence of a mistaken diagnosis. He reported a series of eighty-nine cases, with bacteriologic diagnoses, without a death, without intubation, and without a second dose of antitoxin. Perhaps fifteen were laryngeal cases, and several were severe. The necessity for intubation is like a boy with a whip driving a horse, he punishes the horse because he has it, so intubation is often done just because we have a tube.

DR. GRAFEY of Ohio said the laity as well as the profession at large are shy of statistics when they are so large. He had seen an epidemic of diphtheria in which the laryngeal cases died promptly under ordinary treatment. The statistics, his own and other cases included in the series, showed 53 deaths and 47 recoveries. In another series he used antitoxin only for laryngeal cases, fourteen of sixteen patients recovered. He emphasized the importance of giving antitoxin early and repeating the dose if indicated.

DR. MCFARLAND of Philadelphia had administered some 3000 injections to animals. He mentioned that fact, as the trend of the discussion led to the opinion that the use of antitoxin was founded on an empiric basis. It rests on a scientific basis, worked out in the laboratory.

A definite amount of any serum protects a guinea-pig against a definite amount of toxin; five times the amount of toxin is neutralized by the same amount of antitoxin. It is certainly and absolutely an antidote to the diphtheria toxin.

DR. COX of Chicago emphasized the fact that the profession often neglected to ask at what temperature the serum was kept. It has been clearly demonstrated that it must be kept in a cool place, as it deteriorates at a high temperature.

DR. MAYER of Johnstown, Pa., answered Dr. Coughlin, the essayist, who suggested punishment of children, if all else failed, in inducing them to take nourishment. The depressing effect of the punishment, added to the depressing effect of the disease, is much against recovery. He believed if ice cream is not too sweet it will do no harm. Stimulation, in his opinion, is essential. The purpose, limitation, and dosage of antitoxin apply as well to stimulants.

DR. WITHERSTEEN of Minnesota reported twenty-five cases, with one death. In one family with ten children he had controlled the spread of it by isolation, and though the first patient was almost moribund, with

a pulse of 140, it had recovered under use of antitoxin. New cases developed by the placing of a child in the infected room to sleep, and this emphasized the inefficiency of our present methods of disinfection. The prophylactic dose was administered in two cases with effect.

DR. HOUGHTON of Detroit said that in a series of 800 cases in Detroit, the antitoxin had been administered to 400, with a mortality of twelve and one-half per cent. in patients so treated, and thirty-four per cent. in those not so treated. He reported a case of sudden death in a young man, from fright, when seeing the preparation for the injection before it had been given. He had seen two epidemics in the Children's Free Hospital there; three cases, and thirty-four children exposed, with prophylactic injection limiting the cases to the original three, except in the house physician, who contracted the nasal form of the disease. Three subsequent outbreaks in different months were also checked. Three of the children to whom it was administered were three weeks of age. Only slight urticaria was noted in a few cases.

DR. LOUIS FISCHER of New York exhibited

A NEW INTUBATION TUBE AND INTRODUCER.

The recommendations are that he thus does away with an obturator and substitutes a rubber tube for the ordinary metal tube. The tube has been used in nine cases with perfect satisfaction, remaining in position in one case seven days. The tubes are so cheap that they can be burned after each case.

DR. ELLA E. BARNES of Birmingham, Ala., read a paper on

SOME CAUSES OF CONGENITAL DEFORMITIES.

She said more stress should be laid on preventative medicine. Deformities at birth are, as a rule, accounted for by some superstition, where they can and should be explained by anatomic reasons. Early injury to cells may result in large deformities. Later disturbances should not be considered true malformations.

DR. ANNIE S. DANIEL of New York read a paper, entitled

TUBERCULAR MENINGITIS.

The life of the patient, she said, does not depend on an early diagnosis, as no remedy has been found for the disease. Younger children presented greater difficulty in diagnosis. Lumbar puncture is negative, as a rule. Forty-nine cases were reported, with autopsies in six. They were divided into those under two years, twenty-two cases, and twenty-seven that were over two years. Previous acute illnesses were observed in the majority, and were chiefly intestinal troubles, exanthemata, etc. In many cases a fall is the result of the malady, and not as a cause, as generally considered, and should be termed a premonitory symptom.

A paper was read by DR. THOMAS W. MARVEY of Orange, N. J., upon

MENINGITIS, A COMPLICATION OF MEASLES.

He spoke of the rarity of mention in medical literature of meningitis occurring as a complication of measles. Brief mention was made of all the cases on record of

this combination, and the history of an interesting case of meningitis complicating measles was given.

DR. A. E. DAVIS of New York read a paper, entitled

THE CLINICAL IMPORTANCE OF THE EYE SYMPTOMS IN ARRIVING AT A DIAGNOSIS IN MENINGITIS IN CHILDREN.

As conveyed in the title, the paper was to direct attention to the eye symptoms of meningitis. Many of the eye symptoms of importance in meningitis are largely motor, which may be observed without the aid of the ophthalmoscope. Thirty-eight cases of meningitis were reported; thirteen, simple leptomeningitis; twelve, cerebrospinal meningitis; thirteen, tuberculous.

In the thirteen cases of leptomeningitis there were no eye symptoms in eight. The patients with purulent meningitis, in which no eye symptoms were present, showed, *post-mortem*, the meninges covered with pus and extensive adhesions between pia and dura mater.

In the cases of cerebrospinal meningitis, eye symptoms were absent in seven. Loss of iris reflex was present in one, dilated and fixed pupils in another, strabismus in a third, and in the fourth the pupils were dilated, but reacted to light.

No eye symptoms were present in eight of those having tuberculous meningitis; pupils were dilated in one case, in one the left pupil only was dilated, in one there occurred extensive ulcerative keratitis and conjunctivitis, and in another dilated pupils and lagophthalmia. No tuberculous condition of the eye was seen in any case.

Whether symptoms are primary or secondary must be decided. The motor and visual disturbances should also be differentiated.

Cerebrospinal meningitis gives as prominent symptoms paralysis of sixth, third, fourth, ophthalmic division of fifth, and seventh nerves, with nystagmus and ptosis from cortical lesions. Choked disk, optic neuritis, perineuritis, plastic and suppurative iritis, conjunctivitis, edema of the lids, hemianopsia, as a cortex or tract lesion.

In simple or leptomeningitis the eye symptoms are of more importance in determining the diagnosis than in the cerebrospinal type. The most reliable is optic neuritis. Many cases occur as sequels to middle ear suppuration of a chronic character. Metastasis is another frequent cause. The neuritis is always consecutive to a complicating meningitis.

In tuberculous meningitis the eye symptoms are largely the same as in the simple form.

A paper was read by DR. CHARLES W. BURR of Philadelphia, entitled

HYSTERICAL CONTRACTURES IN CHILDREN.

Hysteria, he said, might be considered very frequent from literature, when in truth it is very infrequent, especially in children.

A case of pseudospinal disease was reported in a child six years old, with pain along the spine, trouble in walking, and lateral curvature. Pain on deep pressure was not present when the child's attention was withdrawn. Reflexes were good and there was no paralysis. The case

was hysteric. Rest, isolation, and a milk diet cured the patient.

The second case was in a female of nine years. Barking like a dog and violence with irregular shrugging of shoulders were the first symptoms. These disappeared during sleep. No paralysis nor contraction of the field of vision was discovered. The same treatment was successful.

Girl, aged eleven years, had typhoid fever, pain in the hips and flexion of the thighs and legs. Force did not overcome the contracture. Pain was caused by passive motion. No palsies were present. All contractures relaxed, save in right hip, under anesthesia. Isolation and passive movements cured all but the right hip in which there was organic disease.

DR. A. C. COTTON of Chicago read a paper upon

INFANT FEEDING.

He asked, How shall we feed the baby? If it takes the breast and is doing well let it alone. If not doing well find wherein the error lies; ascertain if the mother's milk can be made adequate, examine as to total amount, and its various ingredients. Analysis of the mother's milk must be made.

Marchand's and other tests for estimation of fat in milk was found to be wanting. Holt's method is not practical. The best method is Babcock's, although it is clumsy. By taking specific gravity and amount of butter fat we have two factors. Allow equation—total solids equal $\frac{1}{4}$ of specific gravity, taking last two figures, and $\frac{1}{3}$ of fat plus 14.

If milk shows marked departure from normal try to regulate, meanwhile, pumping breast and testing frequently.

The multitude of artificial foods is evidence that we have no substitute for mother's milk. The ideal one must contain all elements of mother's milk, in like proportion. Total quantity must equal that obtained from the mother. That it contain the antiscorbutic element, and be always fresh, are essential.

DR. CHARLES G. KERLEY read a paper on

THE USES AND LIMITATIONS OF CONDENSED MILK AS AN INFANT FOOD. (See page 736.)

The Nominating Committee reported for Chairman, Dr. J. P. Crozer Griffith of Philadelphia; Dr. Edwin Rosenthal of Philadelphia, Secretary.

SECTION ON NEUROLOGY AND MEDICAL JURISPRUDENCE.

SECOND DAY—JUNE 2D.

The entire session was devoted to the reading and discussion of a very scholarly paper by DR. CHARLES K. MILLS of Philadelphia on

APHASIA.

Dr. Mills said: "I would enlarge the zone of language, as given by Dejerine, so as to make it include a center for concepts in the third temporal convolution, and possibly extending over more of the mid-temporal region, and, in addition, a graphic motor center in the caudal portion of the

second frontal convolution. This zone of language unquestionably has its deepest organization and highest development in the region encircling the Sylvian fissure, for here is situated the auditory center, out of which the others may be said to have been evolved, and the motor, articulatory and visual centers which are next in importance, as they have been next in development; but it must also include those portions of the brain in which concepts originate, and, if the views of those who believe in separate graphic motor centers are correct, also those parts in which graphic motor images are represented. Moreover, language on its productive side may result from impressions received through any of the sensory gateways. Written and spoken language is evoked not only by auditory and visual images, but also through olfactory, tactile, gustatory, and spatial percepts, so that in a lesser degree the centers for touch, taste, smell, and other senses than those of audition and vision, and the tracts which associate these centers with the motor side of the brain, may be regarded as properly constituting, at least at times, a part of the zone of language. . . .

"Ross held that in passing from thinking by precepts to thinking by concepts, and from that to thinking by abstracts, no new centers are introduced, but only complication upon complication of the precept center or centers. The evolution of such a complex mechanism, however, necessitates the enlargement of the sensory precept areas, and this would have as its particular result the development of a new structural area intercalated between the receptive and the emissive portions of the brain, but more closely related to the former than to the latter. When lesions occur near, but not in, the sensory inlets, a disorder of language, conceptual in character, results. The portions of the cortex, the activity of which is related to thinking by concepts and abstracts, can be reached in the word-blind through the eye, in the word-deaf through the ear, and in those who cerebrally are both deaf and blind through the nerves of the other special senses. If this be so, in some region of the brain the structural lines must converge, or at least commingle, and cross on their way from the sensory centers to the motor centers, and this area, however restricted or extended, constitutes the *concept region of the zone of language*. The symptomatology which results from a lesion of this concept area is that which was present in the case reported by the writer as localizing this naming or concept center. The patient was unable to recall through either the sense of sight or that of touch the names of objects, the uses of which she evidently recognized."

Dr. Mills referred to a case the symptoms of which seem to bear out the idea of the existence of a separate graphic center. This patient has disturbances of language which have been of gradual development. He is not word-deaf, he is not a true motor aphasic, but he is a total agraphic. He is only able to copy mechanically printed letters or words. At times he seems to have great difficulty in recognizing words or special letters; so that it is difficult to decide whether he is suffering from literal or word-blindness.

According to Freud, the so-called centers, placed in

the periphery of the zone of language, are only points farthest removed from other centers, where, therefore, the fibers of association are least abundant and where a localized lesion is more likely to include only a single element of language. But in Dr. Mills' opinion, mistakes are likely to be made as regards both centers and associating systems. The use of the term "centers" in neurology, while important, is largely a matter of convenience. A center is simply a collection of gray and white matter which represents, physiologically, some action, function, or faculty. Its destruction causes loss or impairment of function, and its irritation leads to excess of functional activity. Centers, like cells, are too often considered as points where force originates. They are best regarded simply as points in reflex arcs or in systems of association, interference with which causes definite phenomena. Impulses are transmitted from nerve-cell to nerve-cell by contact, and not by continuous fibers over distances indefinitely prolonged. It is an error to make too great a distinction between the effects of lesions of association tracts and of centers. Center and tract each plays its own important rôle, and it is for us simply to learn, through clinical and pathologic observations, the results caused by their lesions when these are of definite size and in definite locations.

DR. F. X. DERCUM of Philadelphia opened the discussion. He agreed with Dr. Mills that the subject should be approached from a very broad and general standpoint. He had many years ago himself alluded to the various centers of the cortex as gateways of ingress and egress to the general cortex, and also contended against the consideration of centers as centers. He, Dercum, thought it not impossible that there is a concept or name center, but he did not regard it as proven. As to the graphomotor center, the same would seem to be true. He agreed with the author of the paper that the apparatus must be looked upon as a whole, and of course if there is a lesion in the commissural tracts there will be aphasic symptoms; but it is very difficult, even when the lesions are supposed to reside in the centers, to isolate one from the others.

DR. HUGH T. PATRICK of Chicago was inclined to agree with the views of Dejerine, and those who would locate the various departments of speech in a more diffused manner over the various regions of the cortex.

DR. WILLIAM G. SPILLER of Philadelphia spoke of a case of tactile aphasia. In this form a person does not recognize what he has in his hand. The patient may even be able to describe the object very exactly, but is unable to name it.

The Chairman thought a broad distinction might be drawn between cases of aphasia resulting from defective ingoing impressions and faulty outgoing motor impulses; that aphasias should be characterized as fundamental aphasias and as conceptional aphasias. There are unquestionably certain aphasias produced by impairment of the primary seats of ingoing and outgoing cavities of the brain, while there are other aphasias which are due to trouble of the higher, or the conceptional, or the associated cavities of the brain.

DR. CARPENTER also discussed the paper, and mentioned several experiments which he had made upon rabbits with fine platinum electrodes and the very mildest currents, for locating the chewing center. He found marked variations in different rabbits. Just forward from the chewing center was the lip center, and there was a line which produced both lip and chewing movements, and beyond this the lip region was distinctly located.

DR. FULLER suggested that the resulting symptoms would depend very much upon the extent of the lesion. If a blow was struck with a club, for instance, it might go down exactly at the point of the angular gyrus, whereas if it were a little beyond it would push upon the longitudinal commissure, and if it were a little deeper it would cut off the ingoing fibers.

GENERAL SESSION.

THIRD DAY—JUNE 3D.

After the reading of the minutes of the previous session, an announcement of the program of the day was made by DR. H. A. HARE, Chairman of the Committee of Arrangements.

A resolution recommending the formation of a National Medical Aid Association was referred to the Publication Committee for consideration. The annual report of the Board of Trustees was then read by DR. E. E. MONTGOMERY of Philadelphia. It showed that there is a cash balance in the treasury of the Association of \$7160. Receipts from advertisers in the official *Journal* have been greatly reduced during the past year, this being attributable, it is said, to the publication of formulæ in the advertising pages. Anent the discussion which has recently taken place regarding the advisability of moving the publication headquarters from Chicago, the Board recommended that no change be made. A warm tribute of praise was paid to the present editorial staff, through whose unceasing efforts the standard of the *Journal* has been maintained and its circulation greatly increased during the past year. It was recommended that the Board of Trustees be incorporated in order that it might expedite the settlement of certain legal matters now pending.

DR. W. W. KEEN of Philadelphia then delivered the

ADDRESS ON SURGERY. (See page 727.)

During the reading of this address the Presidents of the State Medical Societies and the Presidents of the State Boards of Medical Examiners had assembled in the Green Room of the Academy to meet Dr. N. S. Davis of Chicago, one of the founders of the Association, and upon its completion he was escorted to the stage. Among those accompanying him were Drs. T. J. Smith of New Jersey, Rienzi Robinson of Connecticut, J. W. Gilbert of Mississippi, Charles Phelps of New York, P. S. Murphy of North Carolina, F. C. Larimore of Ohio, George B. Johnston of Virginia, George H. Noble of Georgia, J. H. Duncan of Missouri, J. M. Matthews of Kentucky, W. H. Sanders of Alabama, Hiber Jones of Tennessee, and Wm. C. Riddell of Montana.

Dr. Davis was introduced by Dr. John B. Roberts of Philadelphia, who gracefully expressed the pleasure and honor of the members of the Association at thus having the opportunity of welcoming him. The President, Dr. Senn, followed with a brief address of like tenor.

Dr. Davis' address dealt with the origin and historical aspects of the American Medical Association, its principles and objects, and the results which have been accomplished by the organization. He spoke at some length on the early progress of the Association, in particular from its incorporation to a period covering the first decade of its existence. He then took up the subject of early medical instruction in America, pointing out its lamentable crudeness and contrasting this with the regulations governing and the opportunities offered for the study of medicine at the present day. After tracing the growth of American medical education and deprecating the rivalry existing between medical schools, which leads in some instances to the lowering of a medical degree beneath the level of a common apprenticeship, he closed with an exhortation to the members to advance the work steadily along the lines established by the founders.

At the close of Dr. Davis' address, Dr. Roberts announced that besides Dr. Davis, three other founders of the Association were now living, all octogenarians—Drs. Alfred Stillé of Philadelphia, David W. Atwater of Massachusetts, and J. B. Johnson of St. Louis. Letters of congratulation and regret from Drs. Atwater and Johnson were read, each evincing the warm heart and vigorous mind of the writer.

An address, entitled

WHAT STATE MEDICAL SOCIETIES HAVE DONE FOR THE PEOPLE,

was then read by DR. GEORGE BEN. JOHNSON of Virginia, and was followed by one on

STATE BOARDS OF MEDICAL EXAMINERS; WHAT THEY HAVE DONE, HOW THEY SHOULD BE MADE UP, AND WHAT THEY SHOULD DO,

which was read by DR. WM. PERRY WATSON of New Jersey.

The following were chosen as officers of the Association for 1898: President, George M. Sternberg of Washington; vice-presidents, first, Joseph M. Matthews of Louisville; second, J. L. Thompson of Indianapolis; third, F. H. Wiggin of New York; fourth, T. J. Happel. Treasurer, H. P. Newman of Chicago; secretary, Wm. B. Atkinson of Philadelphia; chairman, committee of arrangements, J. W. Graham of Denver; librarian, George W. Webster of Illinois. Board of trustees: Jos. Eastman of Indiana, J. F. Priestly of Iowa, Truman W. Miller of Illinois, term expires in 1900. Judicial council: All the former members were re-elected, their terms to expire in 1900. J. H. Musser of Philadelphia was elected to deliver the address on "Medicine;" John B. Murphy of Chicago that on "Surgery," and Samuel C. Busey of Washington, D. C., that on "State Medicine" at the next meeting. Denver, Colorado, was chosen as the next place of meeting.

(To be concluded.)

SOCIAL FEATURES OF THE MEETING.

No general excursion was indulged in by the Association as a body, but many pleasant visits to various points of interest were enjoyed by extemporized parties, the most important of which was a trip to Atlantic City, by invitation of the medical society of that seaside resort. Luncheons were provided in several different places each day, so that the crowd could be somewhat distributed, but even this forethought did not entirely prevent the usual struggle for the means of sustenance. The stated dinners of the various sections were all held simultaneously on Tuesday evening.

The dinner of the Section on General Medicine was held at the Aldine Hotel. The members occupied the large banquet-hall, which was profusely decorated with flowers; the guests numbered over one hundred, and included the leading medical men in attendance at the convention. While no set speeches were on the program, extemporaneous addresses, in response to the call of the toastmaster, Dr. John H. Musser, were made by Surgeon-General George M. Sternberg, U. S. A., Dr. Wyatt Johnston of Montreal, Dr. N. S. Davis, Jr., of Chicago, Dr. D. A. Fiske of San Francisco, and by Drs. H. C. Wood, H. A. Hare, and William Pepper of Philadelphia. Among those in attendance were Drs. Wm. Welch, C. F. Hoover, J. B. Lindsey, S. A. Knopf, J. M. Upshur, H. M. Bracken, H. J. Herrick, J. B. Herrick, Elmer Lee, F. B. Turck, R. C. Cabot, and the following from Philadelphia: S. Solis Cohen, Alfred Stengel, D. M. Hamill, J. D. Steele, J. P. Arnold, D. L. Edsall, Boardman Reed, D. D. Stewart, H. S. Anders, Thos. G. Ashton, Jas. Tyson, A. C. Abbott, M. H. Fussell, A. A. Stevens.

The dinner of the Section on General Surgery was held at the Hotel Bellevue. Among those present were Drs. L. A. Sayre, R. H. Sayre, W. B. Coley, New York; J. McFadden Gaston, Atlanta; E. Souchon, New Orleans; H. A. Kelly, Baltimore; Hunter McGuire, Richmond; H. O. Marcy, Boston; Carl Beck, New York; and from Philadelphia, Drs. Orville Horwitz, E. Laplace, R. G. La Coute, R. Farias, J. B. Roberts, J. K. Young, J. William White, J. Chalmers DaCosta, and W. J. Hearn. Speeches were made by Drs. Nicholas Senn, John Ashurst, Jr., Hunter McGuire, H. O. Marcy, and G. R. Fowler. Dr. Orville Horwitz, who acted as toastmaster for the occasion, also made some particularly felicitous remarks.

The Section on Obstetrics and Diseases of Women held its banquet in the large banquet-hall of the Hotel Walton, covers being laid for two hundred guests. Dr. Joseph Eastman of Indianapolis was introduced as the toastmaster of the evening by the Chairman of the Committee of Arrangements, Dr. M. B. Ward, and proved to be a most genially disposed presiding officer for the occasion. Toasts were responded to by Drs. Theophilus Parvin of Philadelphia, M. B. Ward of Topeka, Kan., Joseph Price of Philadelphia, L. S. McMurtry of Louisville, Ky., W. E. B. Davis of Birmingham, Ala., E. E. Montgomery of Philadelphia, H. P. Newman of Chicago, L. H. Dunning of Indianapolis, T. H. Manley of New York, and C. A. L. Reed of Cincinnati.

The dinner of the Section on Pediatrics was held in the banquet-room of the Philadelphia Bourse Building, at which a large number of the members interested in the diseases of children were present. Dr. J. P. Crozer Griffith of Philadelphia delivered an address of welcome, and then introduced the toastmaster, Dr. John A. Larrabee, the chairman of the section. Among those present at the dinner were Drs. E. E. Graham, E. Rosenthal, W. A. N. Dorland, J. A. Larrabee, J. P. Crozer Griffith, A. C. Klebs, W. W. Gray, Louis Fischer, H. C. Bloom, C. H. Reckufus, W. H. Wells, W. Reynolds Wilson, Clara Dercum, Bertha Lewis, Kate Baldwin, Anna Fullerton, Frances Van Gasken, Mary Jones, Gertrude Walker, Ada Audenried, J. Madison Taylor, A. E. Galant, and H. E. Tully.

The dinner of the Section on Dermatology and Syphilography took place at the Hotel Walton, and was well attended by those interested in this branch of medicine. Dr. D. A. Ravogli of Cincinnati presided as toastmaster, and introduced Drs. L. Duncan Bulkley, S. Politzer, J. A. Fordyce, and J. Abbott Cantrell, who, among a number of others, made speeches. The following were among the guests of the evening: Drs. J. F. Schamberg, M. B. Hartzell, J. A. Fordyce, J. Abbott Cantrell, I. M. Koch, R. A. McDonnell, J. W. Lord, William B. Ewing, John V. Shoemaker, L. Duncan Bulkley, A. Ravogli, J. Edward Stubbett, Charles W. Allen, R. R. Campbell, Henry Fleischner, William M. Baum, and T. Casper Gilchrist.

The Section on Ophthalmology banqueted at the Hotel Walton, about eighty members participating in what was declared generally to be the most successful dinner ever given by this body. Dr. George E. de Schweinitz, who acted as the toastmaster of the evening, introduced many of the members, and was himself one of the most happy speakers of the occasion. The principal address was made by Dr. William Thomson, emeritus professor of ophthalmology in the Jefferson Medical College.

The dinner of the Section on Dental and Oral Surgery was held at the Continental Hotel, over sixty guests being present. The toastmaster was Dr. D. H. Guilford, who introduced as speech-makers of the evening Drs. R. R. Andrews, E. T. Darby, E. S. Talbot, J. Truman, W. F. Litch, C. M. Pierce, J. T. Marshall, G. F. Eames, and G. V. Brown.

The Section on State Medicine banqueted at the Aldine Hotel, and the Section on Laryngology, Rhinology, and Otology at the Stenton.

A reception and luncheon was tendered the Section on Laryngology, Otology, and Rhinology by the Board of Directors of the Howard Hospital. After an introduction by the president of the board, Mr. Azariah W. Hoopes, Dr. Laurence Turnbull spoke in an interesting manner of the inception and growth of the institution, and detailed the present work of the hospital in its several branches. The president of the medical board, Dr. William B. Atkinson, then briefly remarked on the historical aspect of the medical profession in Philadelphia, and was followed with short but timely addresses by Dr. T. S. Harper, a founder of the institution, Drs. W. E. Castleberry and

E. Fletcher Ingals of Chicago, J. Fulton of St. Paul, G. V. Woolen of Indianapolis, and D. Braden Kyle of Philadelphia.

The various receptions held Wednesday evening were very largely attended and proved most enjoyable. The Provost and Faculty of the Medical Department of the University of Pennsylvania received at the Union League. Dr. John Marshall presented the visitors to Provost Harrison, who, in turn, passed them on to the gentlemen and ladies who assisted him in receiving. The large banquet-hall at times was even uncomfortably crowded.

The Dean and Faculty of Jefferson Medical College held a reception at the Academy of Fine Arts. The reception committee included the Dean, Dr. J. W. Holland, and Drs. John H. Brinton, W. W. Keen, and James C. Wilson. Music by a large orchestra was a feature of the evening. Refreshments were served in the lecture-room, which was beautifully decorated with American beauty roses, pink and white peonies, and ferns.

Many of the visiting delegates and their wives were entertained at the Medico-Chirurgical Hospital by the trustees at a reception which was held in the rotunda of the hospital. The new clinical amphitheater, which is one of the largest and finest in the United States, was thrown open for inspection, as were the rest of the hospital buildings. In the new building, the private operating-rooms, and the magnificent amphitheater, as well as the surgical equipment, were the subject of most favorable criticism. Refreshments were served during the entire evening in the Board rooms as well as in the rotunda, and the members of the hospital faculty were untiringly watchful of the comfort of their guests.

Governor Hastings and Mrs. Hastings and President Senn and Dr. John B. Hamilton were among those who accepted of the hospitality extended by the hospital, and the following members of the Board of Trustees constituted the Reception Committee: Drs. C. William Bergner, W. Frank Haehlen, John V. Shoemaker, James M. Anders, Ernest Laplace, W. Easterly Ashton, and L. Webster Fox.

Dr. John V. Shoemaker and Mrs. Shoemaker entertained Governor and Mrs. Hastings, and the members of the Association, at a reception at their residence, 1519 Walnut street. A large number were present during the entire evening, among whom were many of the State legislators. A supper followed the reception.

There was a crush of visitors during the whole of the evening at the reception given to members of the Association at the Woman's Medical College—the first college established for the education of women in medicine—and the gathering was notable for the predominating presence of the fair sex. Among the latter were visitors from California, New York, Massachusetts, Connecticut, and Georgia, and other Southern States.

The hospital was prettily decorated with the college colors of red and gray, Spanish moss representing the latter shade among the flowering and foliage plants that ornamented the lower floor and main staircase. The members of the Faculty, constituting the Reception Committee, were the Dean, Dr. Clara Marshall, and Drs. Anna E.

Broomall, Hannah T. Croasdale, William H. Parish, John B. Roberts, Elizabeth R. Bundy, S. Barton, Anna M. Fullerton, and the Sub-dean, Dr. Ruth Webster Lathrop. The Woman's Hospital, adjoining the college, was also thrown open for the inspection of visitors.

On Thursday a number of enjoyable luncheons were given. The Obstetrical Section of the Association was entertained at the Hotel Stenton, and the Pediatric Section at the Children's Hospital, South Twenty-second street. Dr. W. W. Keen entertained the Surgical Section at the Hotel Walton, Dr. J. H. Musser the Medical Section at Houston Hall, one of the University buildings, and Dr. L. Webster Fox the Ophthalmic Section at the Hotel Bellevue. From six to seven o'clock, Provost and Mrs. Harrison received at a garden party on the campus of the University of Pennsylvania. Thursday evening was devoted exclusively to the theater-party given by Messrs. Lea Brothers & Company to the delegates and accompanying ladies. The list of interesting vitascope pictures proved a source of great entertainment and delight.

The excursion to Atlantic City on Friday was participated in by a very large number of delegates and their wives. A special train on the Philadelphia & Reading Railway left Philadelphia at 5.30 o'clock in the afternoon, the return train leaving Atlantic City the following afternoon at the same hour. Dr. Joseph F. Edwards of Atlantic City, Chairman of the Entertainment Committee, had the matter in charge, and to his untiring efforts, which were ably seconded by his colleagues, the great success of the excursion was due.

The ladies visiting the city with the members of the Association were given a round of pleasure and sightseeing by the ladies of Philadelphia. The New Century Club was thrown open to them, and there they assembled at nine o'clock each morning and decided to which of the many points of interest they should go in small parties, each attended by one of the reception committee as a guide. There have been receptions by the Colonial Dames, by the Ladies' Committee of the Jefferson College Hospital, by the Mayor and Mrs. Warwick, etc.

AMERICAN ASSOCIATION OF GENITO-URINARY SURGEONS.

Eleventh Annual Meeting, Held at Washington, D. C., May 4, 5, and 6, 1897.

FIRST DAY—MAY 4TH.

The President, DR. FRANCIS S. WATSON, of Boston, in the Chair.

Before taking up the scientific work of the meeting, the President, DR. WATSON, made a brief address, in the course of which he called attention to the large amount of new and valuable material that is annually contributed by the members of the Association to this branch of surgery, a field which, before the Association was formed, was thought to be already quite thoroughly explored and cultivated. He suggested that each year some special subject should be taken up for individual investigation, and the results reported at the next annual meeting.

DR. WATSON read a paper, entitled

A REPORT OF POST-MORTEM EXAMINATIONS IN SOME CASES OF MOVABLE KIDNEY.

It consisted of a report of the *post-mortem* appearances in eight cases of movable kidney. Four of these subjects were males; four females. In four of them both kidneys were movable. The right kidney alone was movable in three cases; the left kidney alone in one case. Hydro-nephrosis was absent in all of the cases. There was ptosis of one or more of the other abdominal organs in six cases; none in two. The peritoneal coverings of the kidney were greatly relaxed in four cases and moderately relaxed in four. In two of the first four cases, those in which the peritoneum was greatly relaxed, the kidney rotated upon its long or short axis upon turning the body on the side opposite to that of the mobile kidney, or raising the body to an upright position and then bending it far forward.

An interesting point brought to light by these observations was the absence of serious consequences attributable to the movable kidney. In none of them was there evidence of dilatation of the pelvis or the calices of the kidney, or of any organic change that could be referred to the presence of a hydronephrosis during life, and this was as true of those in which the condition was of long standing and the motility very marked, as in the others. This fact he had also observed in five other cases in the living subject on whom he had performed nephrorrhaphy.

The speaker's observations in these thirteen cases confirmed the view recently expressed by Albarran that at least in the earlier stages of movable kidney the enlargement of the organ so often noticed in connection with the crises is due to acute congestion rather than to retention of urine in the renal pelvis, and subsequent dilatation.

DR. JOHN P. BRYSON of St. Louis followed with a paper upon

CLINICAL OBSERVATIONS OF LOOSE AND DISPLACED KIDNEYS.

These observations had been made in the course of operative work in this field, and only represented a synopsis of what the speaker intended to do finally in this connection.

The real pathologic entity in the condition of loose or displaced kidney is a disturbance in the fatty capsule; whether or not this is accompanied by a more or less general enteroptosis was uncertain. There exists, first, a loosening of the capsule, which allows the kidney to move about within it; second, the capsule itself may become loosened from its posterior and superior attachments in such a way as to slip about with the kidney; third, these abnormal conditions may be combined in a greater or lesser degree.

A good deal of the pain and distress which exists in these cases of loose kidney is due to the relative length and looseness of the vascular pedicle. In the cases of displaced kidney the symptoms varied considerably. In some cases there were no symptoms at all referable to the kidney. In one case, which proved to be a displaced right kidney pressing on the duodenum, the symptoms were entirely gastric in character. Vomiting had never been observed in connection with disturbance of the left

kidney, whether due to calculus or other cause, while with disturbance of the right kidney vomiting was very common.

DR. GEORGE E. BREWER of New York read a paper upon

SOME OBSERVATIONS UPON THE SURGICAL ANATOMY OF THE KIDNEY.

This will appear shortly in the columns of the NEWS.

RESULTS AFTER NEPHRECTOMY FOR RENAL TUBERCULOSIS.

DR. L. BOLTON BANGS of New York made a few remarks on this subject. He stated that he had recently made a careful search of the literature, and obtained the experience of his surgical friends, in order to learn, if possible, what the remote results of nephrectomy for renal tuberculosis were, and how they compared with those of hygienic measures. In many cases it was difficult to obtain this information, as the patient had been lost sight of. The literature was searched as far back as 1888, when Newman made his report on this subject. Since then, by the aid of the cystoscope and ureteral catheterization, the diagnosis of renal tuberculosis has become much more exact. He had collected 112 cases, most of which have not been included in any previous report on the subject. The mortality of the operation was about nineteen per cent., adding to this those cases that died within a few months after the operation, we get a mortality of twenty-eight per cent. Thirty-three of the 112 cases (about thirty per cent.) survived for a period varying from one to eight years after the operation. Twenty-eight of the 112 cases were alive nine months after the operation, and in thirty-three cases the result was stated as "promising." As regards the remote results, therefore, a good prognosis was given in about fifty-five per cent. of the cases operated on. In nineteen cases the remote result could not be ascertained.

A study of the above cases shows that the immediate result of nephrectomy for tuberculosis of the kidney may be said to be brilliant, and the prognosis as to the future, especially if the disease is of short duration and confined to one kidney, is very promising.

DR. EDWARD MARTIN of Philadelphia read a paper on

DETECTION OF STONE IN THE KIDNEY.

He stated that the following points should be considered in making the diagnosis of kidney calculus: Family history, age and environment, traumatism, diathesis, kidney lesions, whether obstructive or otherwise, the presence of certain elements in the urine (among these an abundance of mucus, blood, crystalline deposits in excess, pus, epithelium, and albumen), alterations in the quantity and specific gravity of the urine, pain, one of the most constant symptoms, although very misleading, tenderness on deep palpation, the presence of a tumor. This he stated is only appreciable after pyonephrosis has developed and multiple calculi of large size had formed. Gastro-intestinal disturbance must be considered, also reflex disturbances of the lower urinary tract. Palpation may be an aid in some instances, although in his own

experience he has been unable to make out the kidney in a large per cent. of cases. Ureteral examination affords valuable information. But the X-ray promises to become our most valuable means of diagnosing (a) latent cases of calculus; (b) those with the regular symptoms; (c) to distinguish between renal stone and such conditions as tuberculosis, acute congestion, Bright's disease, nephralgia, and kidney abnormalities giving rise to symptoms identical with stone.

Of the symptoms and signs above enumerated, Dr. Martin said he should place in the order of value:

1. X-ray photographs. Of these several should be taken with the light placed somewhat differently before their negative evidence is accepted.

2. The passage of gravel or small concretions, associated with renal hematuria, fixed pain and colic.

3. Renal hematuria, aggravated by exercise, markedly relieved by rest, remaining long unassociated with pyuria.

After concluding his paper, Dr. Martin exhibited a number of negatives of X-ray photographs, showing the presence of stone in the kidney.

SECOND DAY—MAY 5TH.

URETHRORECTAL FISTULA.

DR. JAMES P. TUTTLE of New York read a paper on this subject.

After describing the various operations that have been resorted to in these cases, he gave a brief report of three cases of urethrorectal fistula coming under his care. In the first case the fistula opened into the rectum about half an inch above the external sphincter and was large enough to easily admit the end of the index finger. The floor of the urethra was absent to a considerable extent, and required to be rebuilt. There was considerable though not excessive connective-tissue deposit about the opening, and a stricture of the membranous urethra anterior to the fistulous opening. After several days of preparation and treatment to sterilize the urinary and intestinal secretions, he operated on August 30, 1896, as follows:

The sphincter was thoroughly incised and all the cicatricial tissue cut away with scissors, thus freshening the edges of the fistula at both ends. The intestinal wall was then dissected from its anterior attachments, up to a point three-quarters of an inch above the fistula and half an inch to each side. The stricture of the urethra was then operated on by perineal section, the incision being carried backward into the fistulous opening. A flap was then dissected from the soft tissues on each side of the urethra large enough to replace that portion of the floor which had been destroyed. These were sewed together with catgut sutures over a full-sized sound introduced through the meatus in order that the caliber of the canal might be accurately reestablished and no pocket left. The fistula being thus closed, the sound was withdrawn and the fresh perineal wound and anterior incision in the urethra left unsutured. The edges of the intestine were then sewed together with chromicized catgut and the rectum packed with iodoform gauze, a drainage tube having been introduced for the escape of gas. A soft,

No. 12 catheter was introduced into the bladder through the meatus and fastened there. The perineal incision was loosely packed with absorbent gauze and dressed with an ordinary T-bandage. It seemed to cause no inconvenience, and was left in for eighteen days, the bladder and perineal wound being irrigated daily with Thiersch's solution. Convalescence was uneventful, the perineal wound healing in about six weeks. The patient left the hospital December 1, 1896, perfectly well.

PRIAPISM.

DR. R. W. TAYLOR of New York read a paper on this subject. He stated that the affection may be divided into the following classes: (1) Priapism observed in infants and children, induced by reflex action, in cases of long, tight, adherent prepuce, of stone in the bladder or prostatic urethra, and of worms in the rectum. (2) Priapism in adult subjects, symptomatic of stone in the bladder, stone in the prostatic urethra, stricture, cystitis, and observed during retention. In these cases the uneasy or painful sensation is felt in the glans penis, while the body of the organ usually is only moderately congested and sometimes curved downward or laterally. This condition disappears upon the removal of the cause. (3) Priapism symptomatic of gonorrhea, with perhaps involvement of the corpus spongiosum and downward curvature. This condition is painful and transitory, and may occur several times during the night. In cases of downward curvature of the penis due to inflammatory engorgement of the corpus spongiosum and spasm of the musculature of the urethra, the term "chordee" is applied. (4) Priapism due to the ingestion of cantharides, which is a form that is seldom or never seen now, since this drug is so rarely used in medicine. (5) Essential Priapism. This form, which was the only one considered by the author, may be divided into four varieties:

(a) Priapism caused by injury to the spinal cord (either high up or low down) and by blows or violence inflicted upon the perineum. (b) Priapism which is a symptom of cerebral or descending spinal-cord disease. (c) Priapism which occurs after alcoholic and sexual excesses; and (d) priapism which occurs in a person in ill health in whom it is difficult to obtain data as to local injury and causation, and in which cases there is now a tendency to look upon leucemia as the etiological factor.

In surveying the results of treatment of the cases of priapism already published, one is forced to the opinion that nothing like a routine method can be laid down. This much, however, can be stated with emphasis: Chloroform narcosis has failed in every case in which it has been used. Ice usually does more harm than good; electricity has no value, and even may be harmful, and leeches to the number of sixteen and forty have failed to produce any amelioration in the condition of the penis, and have been injurious in their depletory effects.

The speaker said that his own preference in dealing with these cases is to resort early to moderate and tentative incisions into the most turgid part, or into parts which are the seat of continuous pain, or into nodular masses, in all probability the result of traumatism. It is

always good practice in priapism to use either the potassium salt alone or in combination with mercury, when a history of antecedent or present syphilis is elicited. A number of cases are on record in which the condition was relieved by potassium iodid. Bromid of potassium, chloral, belladonna, and morphin may be of benefit, especially during paroxysms. Hot baths, hot and cold spinal douches, sponging with hot water, spinal cauterization, anodyne poultices, and perhaps icebags may be found beneficial, but the latter must be used guardedly. Any ephemeral or systemic disorder should receive appropriate treatment.

CHRONIC CONTRACTION OF THE PROSTATIC FIBERS ENCIRCLING THE VESICAL NECK.

DR. EUGENE FULLER of New York read a paper with this title. He stated that the condition to which he referred as chronic contraction of the prostatic fibers encircling the vesicle neck represented a pathologic change, and was totally different from what the French writers have termed "neuralgia of the vesical neck" or "contraction of the vesical neck." The chronic contraction to which he referred, however, bears a relationship to the functional one in that it represents a pathologic state which may apparently result from functional contraction or spasm in cases where, owing to some settled disorder of the sexual apparatus, the rectum, the kidneys, or other organs, functional contraction of the vesical neck has existed as a prominent symptom for a long period. The contraction is permanent, rigid, and does not relax even under profound anesthesia. If a perineal incision is made in such a case, and the finger passed into the membranous urethra in an attempt to enter the bladder, the finger tip will find itself tightly engaged in a ring-like contraction in the deepest portion of the prostatic urethra, where under normal circumstances the canal should be wide, funnel-shape, and elastic, merging itself into the vesical cavity in such a manner that it is impossible to determine just where the urethra ends and the bladder begins. The presence of such a contraction, however, cannot be detected by means of a good-sized sound passed through the urethra. If the surgeon feels carefully with the finger-tip he will discover the urethra just in front of the circular contraction to be roomy and somewhat pouched. The mucous membrane of the entire portion of the deep urethra will ordinarily feel perfectly normal, and free from any evidences of previous inflammation. The condition is not associated with prostatic hypertrophy. After the contraction has been thoroughly ruptured or cut through, little evidence will be left to indicate the nature of the lesion which previously existed.

The clinical symptom prominent in such cases is an inability, either complete or partial, to void urine. This inability is of gradual development, and may at first be intermittent in character, but after a time it becomes permanent. Finally, all power to urinate naturally is lost and permanent recourse to the catheter is necessary.

A diagnosis of this condition has to be made largely from the clinical history of the case, together with an exclusion of other causes which may produce impediments to urination.

The only treatment for chronic contraction of the prostatic fibers encircling the vesical neck which, in the writer's experience, has been efficacious consists in thoroughly rupturing or cutting through these fibers. This treatment, in his hands, has been followed by complete disappearance of all subjective symptoms.

A NEW METHOD OF REMOVING POLYPOID GROWTHS FROM THE BLADDER.

DR. GEORGE CHISMORE of San Francisco described this method, which was discovered by him accidentally. It consists of the introduction into the bladder of a litholapaxy catheter attached to an aspirator; by means of suction the growths are caught in the eye of the instrument, and by gentle traction and slight to and fro movements they are torn from their attachments, and drop into the reservoir of the wash-bottle. The speaker exhibited a number of vesical polypi removed by this method.

DR. CHARLES L. SCUDDER of Boston reported

A CASE OF NEPHRECTOMY FOR CYSTIC ADENOMA IN A PREGNANT WOMAN.

The case was of interest (1) because bile pigment was found in a cyst of the kidney; (2) because the operation did not interfere with the completion of gestation, and (3) a second pregnancy since the operation was normal in every respect.

THIRD DAY—MAY 6.

A POSSIBLE AID TO THE DISCOVERY OF THE TUBERCLE BACILLUS IN THE URINE.

DR. JOHN P. BRYSON of St. Louis read a paper on this subject, in which he called attention to the fact that when tubercle bacilli are present in the urine, they are much more abundant in the residual than in the tidal urine. His experiments, which he detailed, showed a remarkable difference between the number of bacilli found in the tidal and in the residual urine.

THE RELATION OF OXALURIA AND URIC-ACID EXCESS TO GENITO-URINARY INFLAMMATIONS AND DISORDERS.

DR. BRANSFORD LEWIS of St. Louis read a paper on this subject. He gave the following as his conclusions:

(1) Both oxalic and uric acid may appear in the urine, either in a physiologic or a pathologic manner. (2) When pathologic, they may exert certain injurious effects on the genito-urinary organs. (3) These effects may be either the inciting of disease where there has been previous health, or they may act by rendering more serious and resistant to ordinary methods of treatment other inflammations and disorders of those organs. (4) The uric-acid element is not always frankly evident as a casual or complicating factor in such cases. (5) And, when recognized, is neither more nor less easily controlled than where its disease-manifestations occur in other organs of the body. (6) When either the oxalic or uric-acid element is acting injuriously in the ways mentioned, systemic treatment (dietary, medicinal, and hygienic) is demanded, and may even take precedence over the local measures which are usually considered sufficient in such inflammations or disorders.

DR. WILLIAM K. OTIS exhibited an instrument for

photographing the interior of the living urinary bladder.

The following officers were elected for the ensuing year: President, J. William White of Philadelphia; vice-president, James Bell of Montreal; secretary and treasurer, Wm. K. Otis of New York.

AMERICAN ORTHOPEDIC ASSOCIATION.

Eleventh Annual Meeting, Held at Washington, D. C., May 4, 5, and 6, 1897.

(Continued from page 686.)

SECOND DAY—MAY 5TH.

DR. CHARLES L. SCUDDER of Boston read a paper on CONGENITAL DISLOCATION OF THE SHOULDER-JOINT.

He said that but very few cases of this condition have yet been reported, and he therefore felt justified in adding two to the list. The first was that of a girl, fifteen months old, who had been born after a hard labor. During the first week of life it was noticed that the right arm and hand were somewhat swollen. On examination, it was found that the right arm was rotated inward so that the right internal condyle looked backward, and that the head of the humerus was in the infrascapular fossa. The second case was that of a girl of three years, born without the aid of instruments, and after an easy labor. The right elbow in this case was held away from the side, and the forearm and humerus were slightly flexed. The humerus was rotated inward, as in the other case. The length of the right clavicle was $2\frac{1}{2}$ inches, and of the left, $3\frac{1}{2}$ inches. The humerus on the affected side was shorter, measured from the acromion to the condyle. The radius on the right side was half an inch shorter than on the left. In the first instance it was probable that the traumatism of labor played an important part, but this could not be said of the second case. From the measurements, it seemed highly probable that the distinctive feature between traumatic dislocation occurring at birth and true congenital dislocation of the shoulder was that in the latter there was always present a lack of development of the bones of the upper extremity.

A CASE OF ASYMMETRICAL DEVELOPMENT.

DR. A. R. SHANDS of Washington, D. C., presented a boy illustrating this condition. This boy, now twelve years of age, was noticed to be unsymmetrical when he was only two years old. The circumference of the right calf at the middle is 15 and that of the left $9\frac{1}{2}$ inches; the circumference of the right thigh is $18\frac{1}{2}$ and of the left 13 inches. The length of the right and left legs are $28\frac{1}{2}$ and $24\frac{1}{2}$ inches respectively. Strangely enough, the larger thumb is on the small side. He is fairly intelligent, and has an excellent personal history.

SOME EFFECTS UPON THE LEG OF PRONATION OF THE FOOT.

DR. JOHN DANE of Boston presented a communication with this title. As a result of a careful study of the mechanics of the subject, he had arrived at the following conclusions: (1) In pronation of the foot the greater part of the foot remains stationary, and the leg rotates upon

it. (2) In addition to the generally recognized motion of the malleoli inward and slightly downward, the normal outward rotation of the tibia and fibula is replaced by an exaggerated rotation inward. These changes together produce an alteration in the obliquity of the axis of flexion of the ankle-joint sufficient to destroy the mechanism of the ordinary method of supporting weight, and, as a consequence, flexion must be prevented and equilibrium wholly maintained by muscular force, thus quickly leading to fatigue. (4) This inverse rotation of the tibia interferes with the mechanism by which the knee should be locked. In the pronated foot, the knee must be kept in constant extension by muscular force, thus causing fatigue and extreme tenderness over the inner tuberosity of the tibia. (5) To compensate for this inverse rotation of the tibia and fibula, there is an exaggerated inward rotation of the fibula which, in its turn, overstretching the internal rotators of the hip, causing tenderness and pain in the calf and knee. (6) This explanation is wholly in accord with the clinical fact that when, by efficient mechanic apparatus, we have prevented pronation of the foot, we have relieved the pains of the calf, knee, and hip as well.

DR. R. W. LOVETT of Boston read a paper, entitled

FIFTY RESECTIONS IN HIP-JOINT DISEASE.

He formulated the indications for excision as follows:

- (1) When there is steady and persistent failure of the general health;
- (2) when the disease in the joint is progressive, as shown by much induration and discharging sinuses;
- (3) when severe pain and tenderness persist late in the disease; and
- (4) when there is formation of extensive sequestra in the joint.

DR. W. R. TOWNSEND of New York followed with a paper on

EXCISION OF THE HIP.

He said that from 1888 to 1896, 2295 patients with hip disease had applied for treatment at the New York Hospital for Ruptured and Crippled. Of this large number, 121 excisions had been performed on 119 patients. Abscesses, more or less septic, were present in 113 out of the 119 patients. This emphasized the necessity for opening, cleaning out, and draining all of these abscesses as soon as they became septic—indeed, many of the deaths were apparently the result of sepsis rather than of tuberculosis. In cases of extensive disease and severe sepsis, he believed that better results would follow amputation at the hip-joint, for although this would be undoubtedly followed by greater shock than excision, it would do away at once with all sepsis.

THE PRESIDENT attributed the rapidly growing sentiment in favor of avoiding excision to the influence of the conservative mechanic treatment. He still maintained that excision should only be done as a life-saving measure. In the acetabular cases it was not clear to him why amputation was preferable. The great value of the climatic treatment of these cases, he thought, would bear still further emphasis.

THE PROGNOSIS OF HIP DISEASE UNDER EFFICIENT TREATMENT.

DR. LEROY W. HUBBARD of New York read a paper

with this title. He said that the prognosis, as regards life, was good, although the statistics from public institutions would seem to indicate that the mortality was as high as thirty per cent. The best statistics from private practice were those of Dr. C. Fayette Taylor and Dr. L. A. Sayre, and they showed the mortality to be approximately two per cent. The apparatus must be worn for two years in the average case coming under treatment at an early stage, and from three to six years in the neglected cases. According to Dr. Young, the disease was less manageable when developing after puberty, but this was not in accordance with his own experience. The painless form he had found to be the most common, and its course did not seem to be slower or less satisfactory. The shortening should not be over two inches. In making a prognosis, the family history and individual resistance should be given due weight, and it could be stated in a general way that the patient, in a given case, would probably recover with little or no deformity, and with some motion in the joint, and that the apparatus would have to be worn at least two years.

DR. E. G. BRACKETT of Boston read a paper on

GLUTEAL BURSTITIS.

He said that in operating for the relief of this condition the incision should be made over the buttock, a little to the inner side of the outer border of the gluteus maximus muscle, and the fibers should be separated until the edge of the gluteus medius was reached. The tumor could then be easily exposed. It appeared as a well-defined, rounded swelling that suggested easy extirpation, but such was not the case. To remove the bursa usually required extensive dissection, and if too radical a removal were attempted there was danger of injuring the capsule of the joint. The wound should be packed, and would heal without leaving a sinus. For a short time after the operation, a high-soled shoe should be worn, and the motion of the limb restricted, but apparatus was not necessary. Bacteriologic examination in two cases had proved the tubercular nature of the bursitis. One of the cases reported developed hip-joint disease on the other side a year after the operation. In all the cases of gluteal bursitis limp was an early and persistent symptom, and occurred without remissions. Pain was not a prominent symptom, and was referred to the back of the leg and under the knee. It did not last long into the night. The chief limitation of motion was in extreme flexion, particularly flexion of the extended leg. Deep fluctuation could be detected in the upper part of the buttock. The ages of the patients varied from two to fourteen years.

THIRD DAY—MAY 6TH.

DR. JOEL E. GOLDTHWAIT of Boston read a paper, entitled

THE TREATMENT OF DEFORMITIES OF THE KNEE RESULTING FROM TUMOR ALBUS, WITH ESPECIAL REFERENCE TO THE CASES IN WHICH THE PATELLA HAS BECOME ADHERENT.

He said that very frequently in cases in which the patella is adherent to the end of the femur there will still be motion of 30° or 40°, but of course there will be loss

of voluntary control in extension, as the anterior group of muscles are thrown out. The patella is situated almost always on the outer condyle of the femur, and when the tibia comes forward it strikes against this obstacle. It is possible to straighten the leg by tearing the posterior capsule, but of course this would leave the femur displaced backward. In one of the first cases operated upon by him the deformity had existed for a number of years, and the motion amounted to 35°. Failing to reduce the deformity with the genuclast, he opened the joint and removed the patella. It was then perfectly easy to bring the bones into place. Now, four years after the operation, the patient was able to go about. The convalescence was tedious, and the joint was very sensitive for two years. The motion which had been present before the operation had been lost. In subsequent cases, in order to shorten the period of convalescence, he had gone above the condyles, and done a regular Macewen osteotomy. He had then straightened the leg and corrected the knock-knee. The leg was put up a little extended. These cases had been extremely satisfactory, the convalescence short and the motion preserved. In rheumatoid cases there seemed to be nothing to do but perform excision of the joint.

DR. HENRY LING TAYLOR of New York then reported two cases of

GENERAL LAXITY OF THE LIGAMENTS WITH CONGENITAL HIP LUXATION.

General laxity of the ligaments, he said, might arise from abnormal traction, pressure of malpositions, or displacements, or pressure due to joint effusions.

DR. JOHN RIDLON presented a

SKIAGRAPH OF CONGENITAL DISLOCATION OF THE HIP.

The neck of the femur on the dislocated side appeared to be straighter than the normal neck. It was also evident that the leg, as a whole, was rotated outward so that the lesser trochanter was more prominent on that side than on the other.

DR. JOHN RIDLON read a paper, entitled

FOUR CASES OF RECENT FRACTURE OF THE NECK OF THE FEMUR.

He said that in 1892 he had published a paper embodying the results of treatment of twelve cases of fracture of the neck of the femur with the Thomas long hip-splint, and to these he would now add four more cases. He said that, briefly stated, his treatment consisted in reducing the deformity and securing approximation of the fragments, unless there was impaction present, and then the application of the Thomas long splint, with adhesive plasters on both sides. There were buckled to the ring, and "fixed traction" made to an amount represented by the weight of the splint. He was able in these cases to get the patient out of bed at the end of eight weeks, and to remove the splint a short time afterward. The uniform result was solid union and good use of the limb.

DR. R. H. SAYRE of New York reported a case of COXA-VARA AS A MANIFESTATION OF LATE RICKETS.

The patient was a girl of sixteen in whom there was slight lateral curvature of the spine. The thighs crossed each other at the middle third. There was no muscular spasm and no tenderness, and the limbs were readily straightened by traction.

Following the discussion of the papers the regular business meeting was held and Dr. R. W. Lovett of Boston was elected President, and Dr. John Ridlon of Chicago, Secretary, of the Association for the ensuing year.

REVIEWS.

PREVENTATIVE MEDICINE; a brochure for the laity, being a practical treatise on the theory and the technic of the Prevention of Disease. By DR. CLARENCE RUTHERFORD HENDRICKSON, County Physician of Canadian County, Oklahoma; author of "Practical Lessons in English Grammar." Wichita, Kansas: 1896.

MISTAKES in diagnosis and inability to dispel disease are evidently not the only factors that the author of "Preventative" Medicine and "Practical Lessons in English Grammar"—two strongly contrasting titles—has to contend against. In his dedication he acknowledges the hardships of the early years of his eight of practice, and in his conclusion he lashes himself into a fury concerning patent remedies and quack doctors. The fences of Yukon, Oklahoma, must be as well covered with alluring advertisements and requests to "cure yourself" as the dead walls of New York.

Despite its innumerable errors, this little brochure contains much common sense, and its author is undoubtedly a studious, honest man. But why should the Oklahoma laity be afraid to clean its ears for fear of the *aspergillus*, and why, indeed, should it know so accurately about the gonococcus, the *bacillus typhosus*, the *bacillus mallei*, the *bacterium pneumonia crouposa*, et cetera? We look by no means with favor upon semi-scientific medical brochures for the reading of the lay public and especially do we feel disinclined to see brochures on "preventative" medicine; so if we say that this one contains some common sense, it must be taken as very high praise.

TRAITE DE THERAPEUTIQUE ET DE MATIERE MEDICALE. Par VICTOR AUD' HOU, Médecin de l'Hôtel Dieu de Paris. Paris: G. Steinheil, 1897.

THIS work of 1200 pages has been written for the needs of the student as well as for reference by the practicing physician. It is based upon a strict classification of drugs and upon the scientific determination—by experiment, mostly, of the action of medicinal agents. It contains an account of the older as well as of the more modern drugs, and describes in detail recently inaugurated therapeutic measures. Nosology, prophylaxis and pharmacology are considered in its pages, and following the preface, is a review of the bibliography of French works on therapeutics. The work is an exhaustive effort to place the modern view of therapeutics in all its phases on record, and is an excellent reference-book for everyone who is interested in the subject.

Betanaphtol-Bismuth (Orphol) Von Heyden.

The most reliable intestinal antiseptic in cholera infantum, the diarrhœas of consumptives, gastro-intestinal catarrh, typhoid fever, etc., possessing not only astringent but also antiseptic properties. Orphol is a neutral, light-brown, almost odorless and tasteless non-caustic powder, containing 80 per cent. of bismuth oxide in chemical combination with 20 per cent. of Betanaphtol.

According to **Prof. Von Nencki**, Betanaphtol-Bismuth agrees with patients well, even when its use is long continued.—(*Wratsch*, 1893, No. 1.)

In a paper entitled "The Preparations of Bismuth," read before the Clinical Society of New York, December 15, 1894, **Prof. Reynold W. Wilcox** recommends the use of Betanaphtol-Bismuth in the treatment of chronic intestinal catarrh, typhoid fever, etc. After the observation of at least one hundred cases, he believes that better results have been obtained, and that in a shorter period of time, than could have been expected from the inorganic bismuth compounds.

In *The New York Medical Journal*, March 30, 1895, **Dr. Hugo Engel**, in an article entitled "The Therapeutic Effects of Betanaphtol-Bismuth," arrives at the following conclusions: "Betanaphtol-Bismuth far surpasses in effect the older preparations of bismuth. In my opinion, if I may draw a conclusion from the cases under my charge, the Betanaphtol-Bismuth is the most reliable intestinal disinfectant that we possess to day, and combines with its antiseptic action an astringent effect. It can be given with impunity in doses large enough and for a sufficient length of time to achieve our purpose, the cure of diseases due to the presence of infectious material in the alimentary canal, and it may be employed in infants as well as in adults."

In an article published in *The Medical Record*, July 13, 1895, entitled "The Treatment of Gastro-Enteritis Catarrhalis Acuta, including Cholera Infantum," **Dr. Louis Fischer** says: "I formerly used bismuth in the form of sub-nitrate, the salicylate, and the sub-carbonate, but I give decided preference to the Bismuth-Betanaphtol." He entirely agrees with **Prof. F. Hueppe**, who has found it a most powerful intestinal antiseptic.

D. D. Stewart, M.D., Professor of Diseases of the Stomach and Intestine in the Philadelphia Polyclinic and College for Graduates in Medicine; Physician to the Episcopal Hospital, etc., in an article entitled "The Treatment of Lienteric Diarrhoea," published in *The American Therapist*, April 15, 1897, says: "A promising salt of betanaphtol for this condition is that of Betanaphtol-Bismuth (Orphol). This I have employed in my intestinal work for the past four years with very good results."

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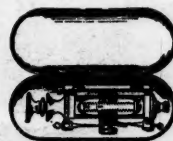
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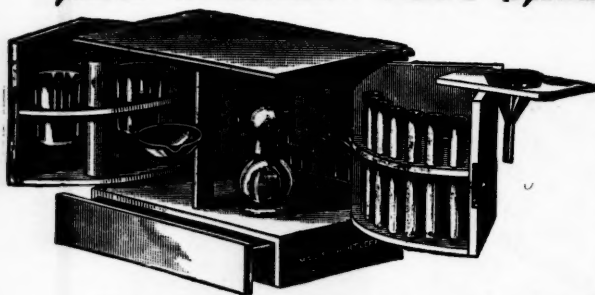
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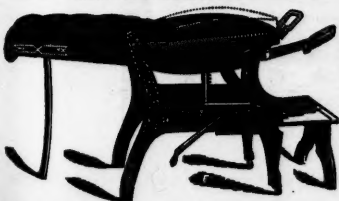
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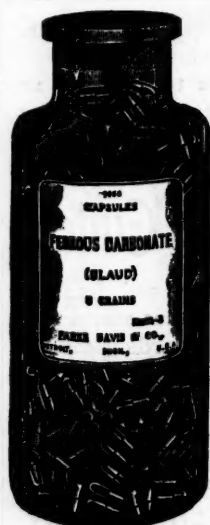
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